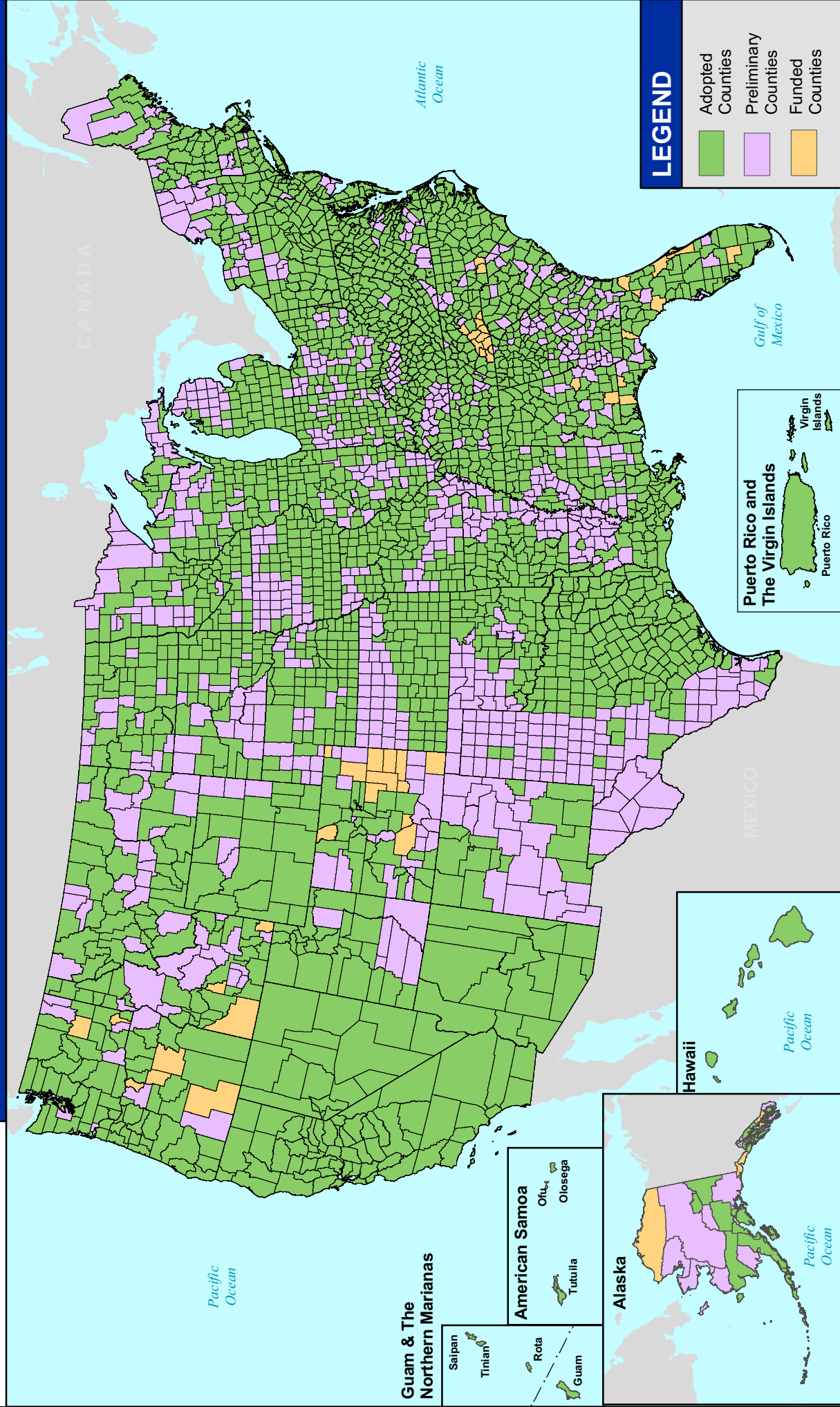


Map 5-7. Progress of Mapping Activities Through FY09

Projected as of November 5, 2004

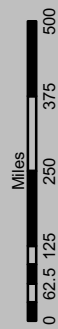
FEMA



LEGEND

- Adopted Counties
- Preliminary Counties
- Funded Counties

Projection: North America Albers Equal-Area Conic
Data Source: FEMA Sequencing Tool



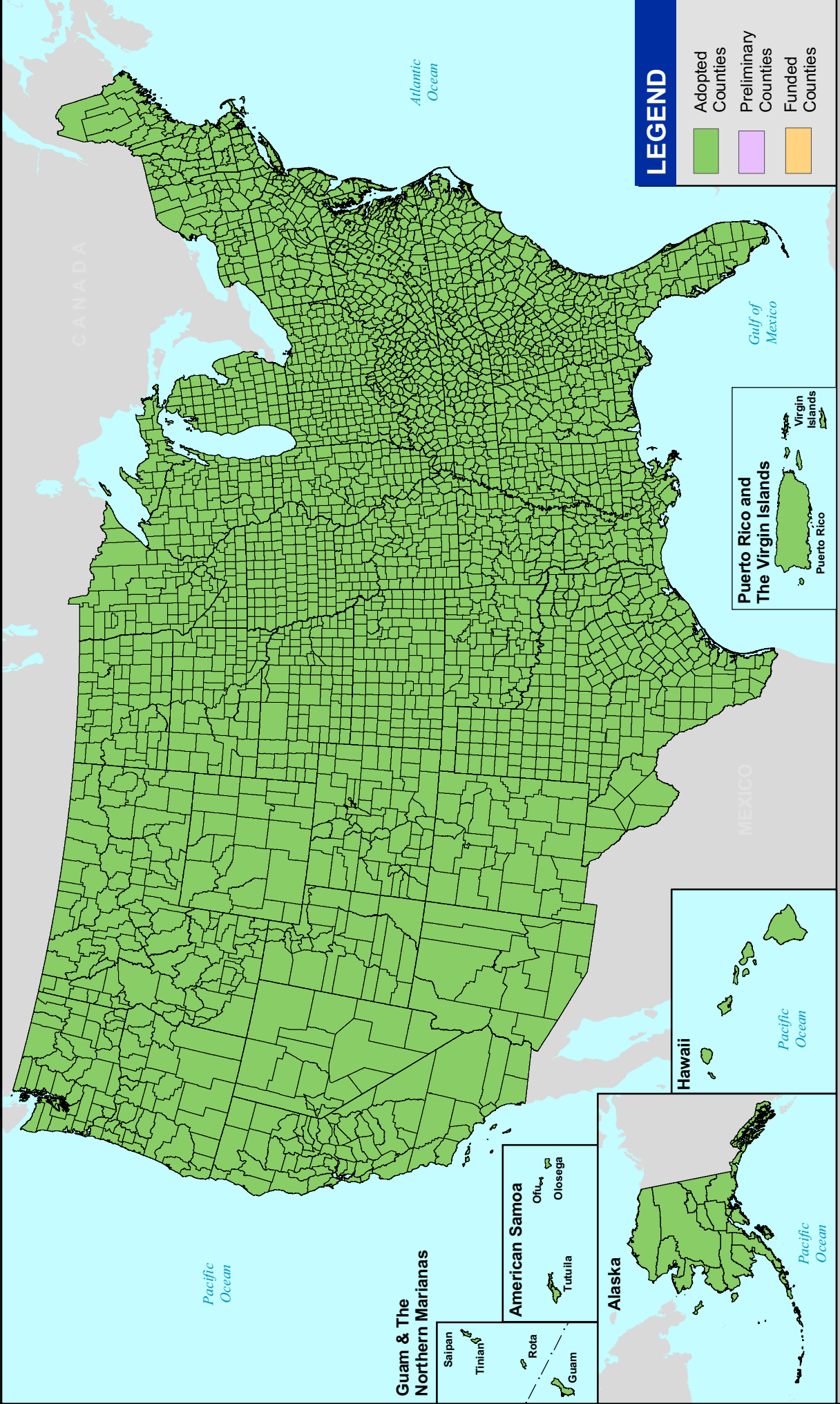
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FEMA

Map 5-8. Progress of Mapping Activities Through FY10

Projected as of November 5, 2004



MHIP



Projection: North America Albers Equal-Area Conic
Data Source: FEMA Sequencing Tool

Table 5-7 lists the number of counties within each decile that are projected to be funded during each fiscal year. This information is useful in balancing mapping activities to coincide with regional business plans and goals, and nationwide sequencing.

Table 5-7. Number of Counties Nationwide per Decile Funded per Fiscal Year

Decile	FY03 and Prior	FY04	FY05	FY06	FY07	FY08	Total
1	149	67	46	26	15	11	314
2	83	69	58	49	41	14	314
3	54	74	54	56	47	30	315
4	28	44	43	84	70	45	314
5	22	36	33	74	76	76	317
6	26	21	18	51	110	89	315
7	19	23	16	54	84	118	314
8	23	8	19	40	107	117	314
9	17	15	22	25	86	150	315
10	10	9	10	31	53	201	314
Total	431	366	319	490	689	851	3146

5.4 Comparison of Planned Activities with Business Plans

As described in section 2, Stakeholder Input, nearly all states submitted business plans to FEMA documenting their plans for Map Modernization. The state business plan guidance provided by FEMA requested an outline of how the state/locality will develop and maintain the capability and capacity for managing Map Modernization efforts. FEMA did not direct states to constrain their plans within a specific budget, but did request that states identify how state and local resources could be provided to address gaps in Federal funding for their desired Map Modernization efforts.

FEMA’s national plan is not a composite of the state plans. In some cases, the anticipated funding shown for a state does not match the cost estimate (if provided). Of the states that submitted estimated costs as part of their business plans, many exceeded the resources available for the portion of the Regions’ budgets available for their jurisdiction. Some states did not identify cost-sharing, leveraging opportunities, or expansion of Cooperating Technical Partner program participation. Therefore, the cost estimates for flood map update projects requested in the state business plans do not reflect all of the opportunities to leverage funding from other sources.

FEMA incorporated states’ business plans to the greatest extent possible in the sequencing of studies. Many plans used different factors to develop their sequencing, and some states did not provide sequencing. In some cases, the visions of the state and FEMA were relatively close, resulting in the same counties being selected for study. In other cases, FEMA needed to deviate from state plans to meet national requirements or to address supplemental information not provided by the states.

Most, but not all, states provided input on requested sequencing of flood map update projects as indicated in section 2. FEMA compared the national sequencing with the sequencing provided in those 29 plans, and by FY05, 76 percent of the studies sequenced by the states for funding in FY05

or prior will have been funded. This shows a close correlation between the sequencing in appendix A and the sequencing provided in these state plans. FEMA will continue to work with the states to refine the sequencing within their state as Map Modernization evolves.

5.5 Distribution of Studies

The production sequence can be evaluated by considering several different distributions of the studies. Subsections 5.5.1, 5.5.2, and 5.5.3 present a comparison based on risk, funding amount, and funding year, respectively.

5.5.1 Distribution by Risk

Map Modernization can be driven by risk, as stated by the FY03 funding distribution factors. This sequencing is described in section 3, Distribution of Funds. To evaluate distribution by risk, all counties in the Nation were sequenced by risk and divided into deciles, with the top 10 percent of at-risk counties in the first decile sequencing and the last 10 percent of at-risk counties in the last decile sequencing. Figure 5-2 shows in general that studies of counties with the highest risk (the lower decile counties) are being performed in the early years of the Map Modernization effort, while studies of counties with the lowest risk (the higher decile counties) will be performed in the later years.

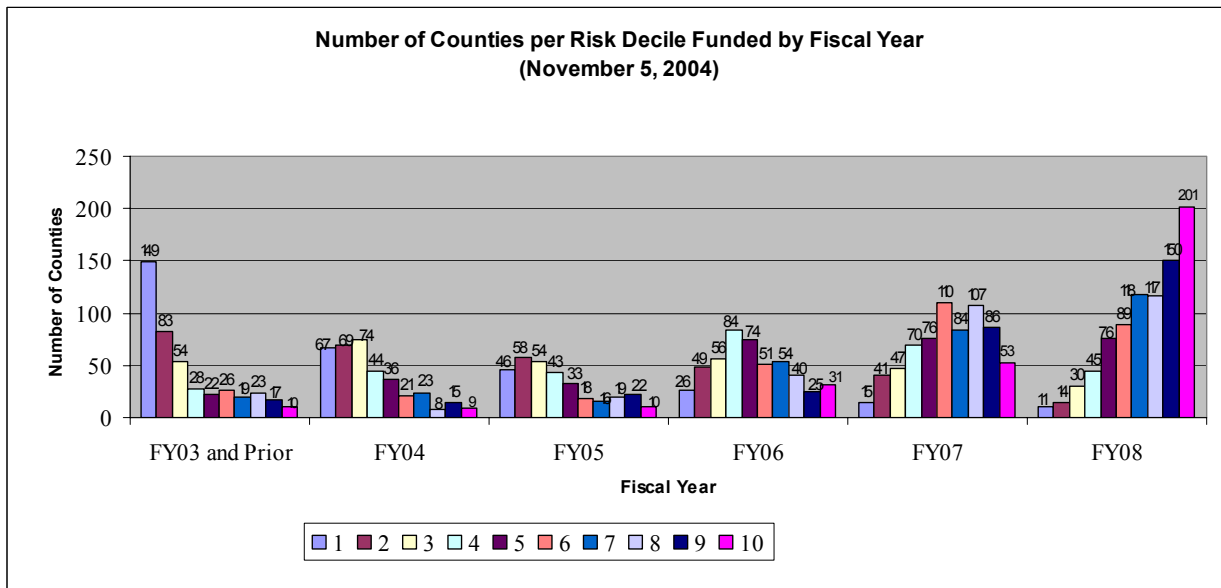


Figure 5-2. Number of Counties Funded per Risk Decile by Fiscal Year

5.5.2 Distribution by Funding Amount

To evaluate distribution by funding amount, the sequencing of the studies is sorted by the amount of Federal funding available for each county map update, the basis of a range of dollars, and

compared to the population percentage. FEMA Regional Offices estimated funding required for each county study through state and local knowledge of study needs and experience in performing flood insurance studies. Section 7, Level of Study and Level of Risk, provides descriptions of study types and costs.

Table 5-8 shows that approximately 33 percent of the studies are forecasted to be performed for \$100,000 or less, covering 24 percent of the population. Table 5-8 also shows that approximately 15 percent of the studies will receive funding greater than \$400,000, covering more than approximately 42 percent of the population. Figure 5-3 shows the number of counties per funding range. Map 5-9 shows the funding range by county. Figure 5-4 shows the percent of population per funding range.

Table 5-8. Number of Counties Within Given Funding Range

Range (in \$1000s)	County Distribution	Percent of Distribution	Percent of Population
\$0 - \$100	1038	33%	24%
\$100 - \$200	1004	32%	14%
\$200 - \$400	640	20%	21%
\$400 - \$600	262	8%	19%
\$600 - \$800	66	2%	5%
\$800 - \$1000	53	2%	5%
> \$1000	83	3%	13%
Total	3146	100%	100%

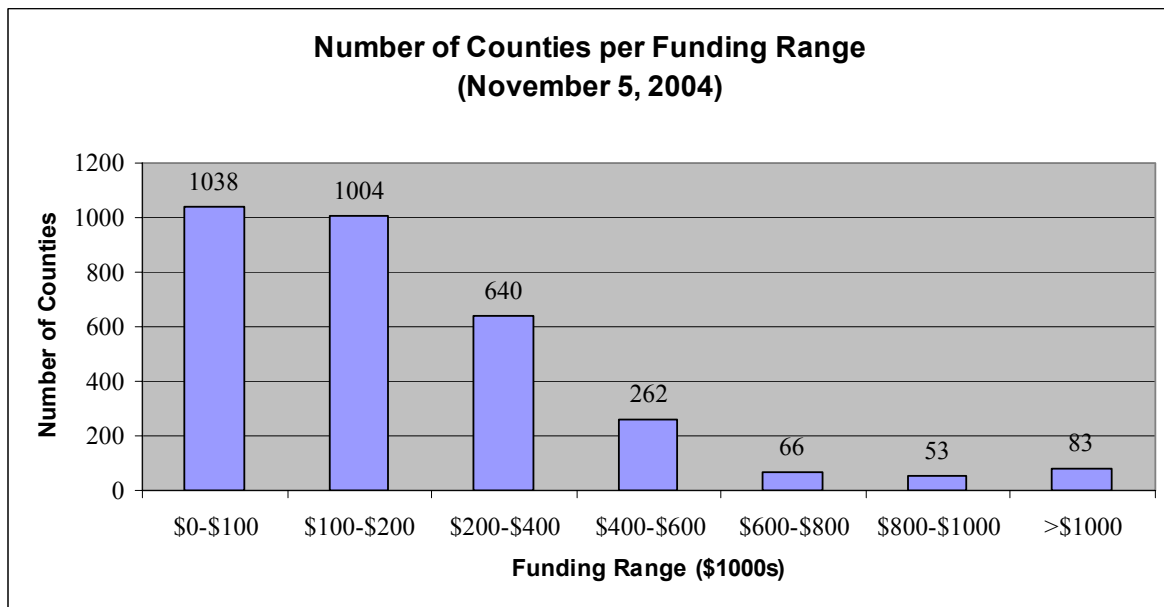
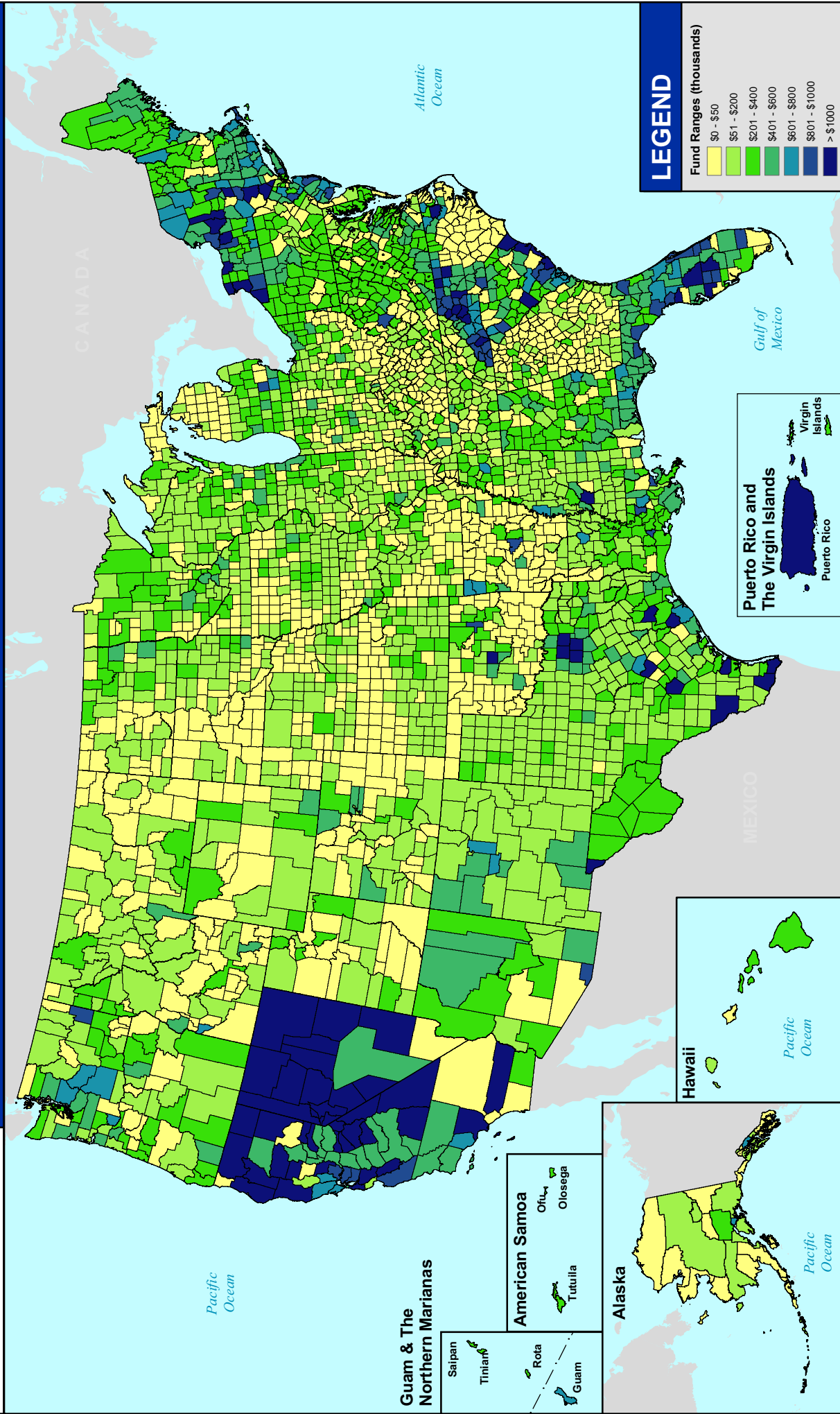


Figure 5-3. Number of Counties per Funding Range

Map 5-9. Funding Range for Counties

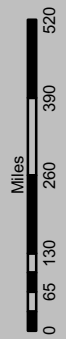
Projected as of November 5, 2004

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Fund Ranges (thousands)
\$0 - \$50
\$51 - \$200
\$201 - \$400
\$401 - \$600
\$601 - \$800
\$801 - \$1000
> \$1000



Projection: North America Albers Equal-Area Conic
Data Source: FEMA Sequencing Tool

MHIP

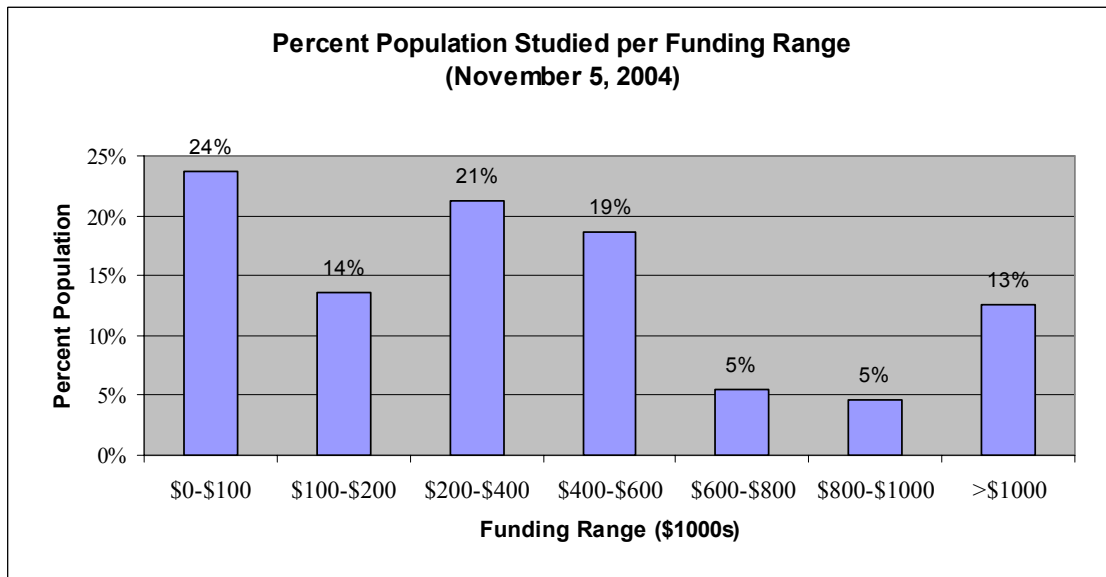


Figure 5-4. Percent Population Studied per Funding Range

5.5.3 Distribution by Funding Year

Table 5-9 shows the average funding per county for each year of the plan. For instance, in FY05, the average study will cost \$296,000.

Table 5-9. Average Funding Level per County by Fiscal Year

Fiscal Year	Average (In Thousands)
FY03 and Prior	\$198
FY04	\$239
FY05	\$296
FY06	\$258
FY07	\$200
FY08	\$168
OVERALL AVERAGE	\$219

Figure 5-5 is a graphical presentation of this information.

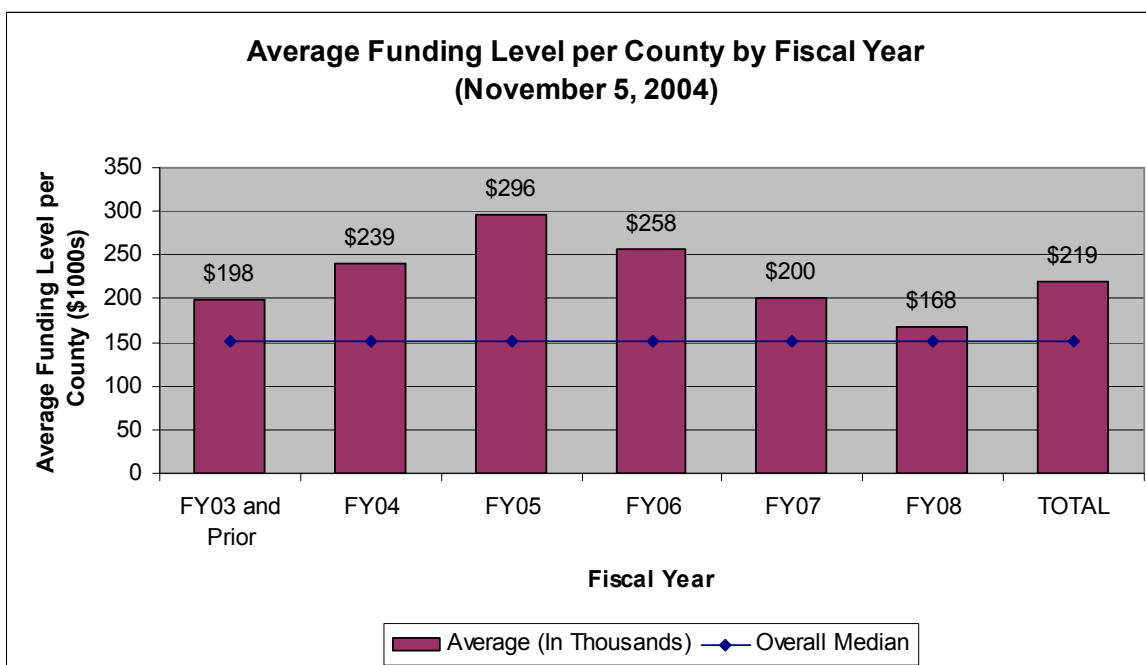


Figure 5-5. Average Funding Level per County by Fiscal Year

5.6 Analysis of Coastal Counties

Coastal counties typically have a higher risk of flooding than non-coastal areas. A total of 352 counties have shoreline exposure to the Atlantic Ocean, the Gulf of Mexico, the Pacific Ocean, or the Great Lakes. All of these counties are subject to coastal tidal flooding effects during the base (1-percent-annual chance) flood event, with additional exposure and influence by the coastal hazards as a result of wave effects (wave transformation, wave setup, wave heights, and wave runup) and, in most cases, beach and dune coastal erosion processes. Coastal counties also may have primary frontal dunes located along the shoreline that would make them subject to the primary frontal dune velocity zone (wave heights greater than 3 feet, VE Zone) mapping criteria.

In this regard, these coastal counties represent those counties with the greatest risk and exposure to coastal hazards. It is appropriate to consider this latter set of coastal counties separately from those with exposure only to backwater flooding effects (coastal stillwater elevations only) during the coastal base flood event. However, all coastal counties would be affected and subject to revisions and updates if a coastal flood restudy of storm surge established new stillwater elevations. The main difference is that the adjacent inland coastal counties with coastal backwater flooding effects would be subject only to coastal flood boundary delineation, and no additional detailed analyses of wave effects or erosion would be required.

Approximately 85 additional adjacent, inland counties may also be considered coastal counties because they have shoreline exposure to major inland bays, such as the Chesapeake Bay, with direct connection to the open ocean. In general, these counties are within close proximity (within 25

miles) to the principal flood source or have the possibility of a connection to a river or bay subject to coastal tidal flooding. On the basis of a preliminary review of effective flood hazard information, 22 of the 85 adjacent inland counties have confirmed coastal tidal flooding included in the flood study and 13 have unknown influence by coastal tidal flooding.

Of the 22 identified adjacent inland counties, 6 have coastal tidal flooding in the published flood data for the coastal base flood event, as well as the additional risk component of exposure to and influence from wave effects and coastal erosion processes. In the other 16 counties, the coastal tidal flooding during the base flood event is a result of backwater flooding effects along a river or inland bay with a direct connection to a principal flood source along the open ocean. These counties probably would not be subject to wave effects or coastal erosion processes at the time of the coastal base flood event.

Thirteen other adjacent inland counties among the 85 counties researched have no published flood data available for review online. For the purposes of this plan, FEMA assumed that they probably would not be subject to any influence by coastal tidal flooding during the coastal base flood event. FEMA will need to review the potential influence of coastal flood hazards for these and the remaining 50 inland coastal counties in more detail as the appropriate coastal flooding sources are restudied and remapped.

Table 5-10 and figure 5-6 show the number of coastal counties planned or projected to be funded, issued in preliminary form, and adopted by fiscal year. This includes the 352 coastal counties and 35 of the 85 inland coastal counties. Table 5-10 shows that most coastal counties are distributed equally from FY04-FY08, with all being funded by FY08.

Table 5-10. Number of Coastal Counties Funded, Preliminary, and Adopted by Fiscal Year

Fiscal Year	Coastal Studies Funded	Coastal County Preliminaries	Coastal Counties Adopted
FY03 and prior	97	22	9
FY04	61	18	12
FY05	50	68	23
FY06	68	63	64
FY07	52	82	60
FY08	59	60	84
FY09	0	63	62
FY10	0	11	73

Figure 5-6 presents this information graphically.

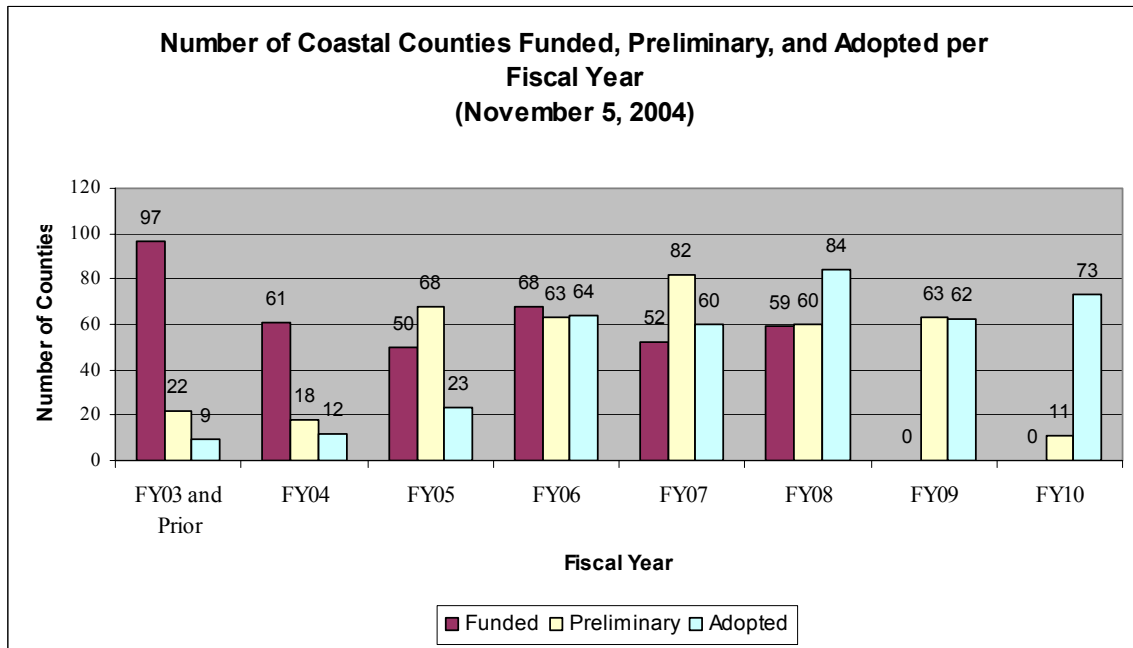


Figure 5-6. Number of Coastal Counties Funded, Preliminary, and Adopted per Fiscal Year

