

6.0 KPI PERFORMANCE

This section discusses the actual and projected production of map updates, which are detailed in the previous sections, in the context of FEMA's national Key Performance Indicators (KPIs) for Flood Map Modernization. It analyzes progress against the KPIs based on actual and planned map production progress for FY04 and FY05, and forecasted progress for FY06-FY08.

Meeting these KPIs will help FEMA provide reliable flood risk data in Geographic Information Systems format.

6.1 Flood Map Modernization National KPIs

KPIs 1 and 2 for Flood Map Modernization, as described in section 1, Introduction, emphasize both improving and updating the Nation's flood maps. KPIs 3 and 4 focus on the level of local and State involvement in and ownership of those maps. Meeting these KPIs will help FEMA provide reliable flood risk data in Geographic Information Systems (GIS) format (Digital Flood Insurance Rate Maps [DFIRMs]). The four KPIs are as follows:

1. KPI 1 is based on the percentage of the national population that has digital flood data available online. Because the National Flood Insurance Program (NFIP) and Flood Map Modernization are organized around community participation, this goal is measured in terms of communities mapped to date. A community's population can be counted when it receives preliminary maps based on FEMA's DFIRM standards.
2. KPI 2 is based on the percentage of the national population with adopted maps. Because the NFIP and Flood Map Modernization are organized around community participation, this goal is measured based on communities mapped to date. A community's population can be counted only when it has effective DFIRMs. KPI 2 lags behind KPI 1 primarily because of the time it takes for the maps to become effective.
3. KPI 3 is based on the number of dollars contributed by local and State partners divided by the number of dollars allocated by FEMA for use in regional flood mapping. Leverage also can include the dollar value of in-kind services such as providing topographic data, field surveys, engineering analyses, and GIS efforts. Note that the KPI target is 20 percent each year. FEMA strongly encourages Cooperating Technical Partners (CTPs) to contribute at least 20 percent of the required costs of their projects. KPI 3 also accounts for contributions by other Federal agencies that support Flood Map Modernization projects because leverage is not just limited to the contributions made by CTPs.
4. KPI 4 shows the number of dollars allocated to CTPs divided by the number of dollars allocated by FEMA for regional flood mapping. This KPI measures the percentage of total

fiscal year funding that is sent to CTPs to encourage their involvement in preparing and maintaining their flood map products.

FEMA has adjusted the specific FY06-FY08 annual targets for KPIs 1 and 2 as a result of the Mid-Course Adjustment. In altering the primary focus of the initiative, FEMA found it necessary to re-evaluate the annual targets, which are listed in table 6-1.

Table 6-1. Flood Map Modernization National KPIs

Key Performance Indicator (KPI)		Targets				
KPI	Management Indicators	FY04	FY05	FY06	FY07	FY08
KPI 1	Percentage of population with digital GIS flood data available on-line	20%	50%	50%	60%	70%
KPI 2	Percentage of population with adopted maps that meet quality standards	10%	20%	25%	35%	50%
KPI 3	Percentage of leveraged contributions toward digital flood data	20%	20%	20%	20%	20%
KPI 4	Percentage of appropriated funds sent to CTPs	20%	25%	33%*	33%*	33%*

Note: KPIs 1 and 2 are cumulative. KPIs 3 and 4 are annual.

* - These targets for FY06-FY08 depend on the ability to develop local and State capability. There are significant assumptions in KPI 4 and FEMA is examining strategies to achieve the target numbers.

The targets are national and began in FY04, the first year of full funding, although progress to date includes activities funded in FY03. Some regional statistics may exceed these KPIs and others may fall short, but all regional statistics roll-up to the national KPIs.

6.2 Analysis of Progress through FY06

Section 4, FY03-FY06 Production Report, summarizes FEMA’s progress in terms of map production through FY05, plus the first three quarters of FY06. This section compares those data with FEMA’s FY06 KPIs. Table 6-2 lists FEMA’s FY06 KPI target and projection results, based on FEMA’s data available through June 30, 2006.

Table 6-2. KPI Targets and Projections through FY06 (As of June 30, 2006)

Key Performance Indicator		FY06 Target	Projection
KPI 1	Percentage of population with digital GIS flood data available on-line	50%	49%
KPI 2	Percentage of population with adopted maps that meet quality standards	25%	23%
KPI 3	Percentage of leveraged contributions toward digital flood data	20%	27%
KPI 4	Percentage of appropriated funds sent to CTPs	33%	39%

Note: KPI 1 and KPI 2 are cumulative. KPI 3 and KPI 4 are annual.

FEMA is committed to successful implementation of Flood Map Modernization. FEMA has made significant accomplishments in providing updated digital GIS flood data for 39 percent of the population of the United States through FY05. This accomplishment will help FEMA provide a reliable picture of flood risk, promote sound floodplain management practices, and support an actuarially sound flood insurance program with fair and equitable flood insurance rates.

Based on FEMA's data available as of June 30, 2006, approximately 49 percent of the population will have digital GIS flood data online, and 23 percent of the population will have adopted maps, by the end of FY06.

The availability of updated, accurate flood hazard data and maps, and use of adopted maps by participating NFIP communities, is fundamental to the success of Flood Map Modernization. In developing the Mid-Course Adjustment, FEMA also recognized the importance of focusing study efforts on the counties with the greatest flood risk. Therefore, FEMA adjusted the targets for performance for Flood Map Modernization KPIs 1 and 2 through FY08.

Even given the refined Flood Map Modernization focus and KPI targets that are results of the Mid-Course Adjustment, these targets remain ambitious; however, FEMA believes these are achievable over 5 years.

The following subsections present FEMA's estimates of achievement based on data available as of June 30, 2006.

6.2.1 KPI 1: Population with Digital GIS Flood Data Available Online

Table 6-3 presents anticipated progress, by Region, toward meeting KPI 1 targets through FY06 (calculated cumulatively). The table lists FEMA's projections through the end of FY06 of the number of counties with preliminary maps, the projected percent of the nation's population covered by these maps (calculated by community), and the total of the nation's population covered by the preliminary maps (calculated by community). In addition to the population covered by the countywide maps, the table also includes population with updated GIS flood data at the community level. As of the end of FY05, FEMA provided digital GIS flood data available online for 39 percent of the population. According to data available as of June 30, 2006, FEMA anticipates having digital GIS flood data available online for 49 percent of the population by the end of FY06.

Table 6-3. KPI 1: Projected Population with Digital GIS Flood Data Available Online through FY06 (As of June 30, 2006)

Region	Counties With Preliminary Maps	Population Total with Preliminary Maps*	Percent of Population with Preliminary Maps
1	10	1,982,967	14%
2	15	17,469,656	56%
3	79	12,675,593	46%
4	228	32,609,481	61%
5	59	17,442,886	35%
6	56	17,662,288	53%
7	102	3,891,315	30%
8	50	5,527,299	59%
9	46	28,064,194	66%
10	15	3,366,682	30%
Total	660	140,692,361	49%

* Population includes areas of counties not yet studied in their entirety

6.2.2 KPI 2: Population with Adopted Maps that Meet Quality Standards

Table 6-4 presents the Regions’ anticipated progress, by Region, toward meeting KPI 2 targets through FY06 (calculated cumulatively). The table lists FEMA’s projections through the end of FY06 of the number of adopted maps, the total population covered by the adopted maps (calculated by community), and the percent of the Nation’s population covered by these maps (calculated by community). In addition to the population covered by the countywide maps, these projections also include population with adopted maps at the community level. As of the end of FY05, 16 percent of the population had adopted flood data that meet quality standards. According to data as of June 30, 2006, FEMA anticipates having adopted maps for 23 percent of the population by the end of FY06.

A note on adopted maps: since maps generally are adopted not by counties, but by smaller jurisdictions, it is not meaningful to compare the number of counties with preliminary maps with the number of counties with adopted maps. It also takes time after a map is preliminary before it is effective, so a lag is expected.

FEMA sends a Letter of Final Determination (LFD) to a community as notification that a new DFIRM will become effective in 6 months and that a flood-prone community must also adopt a compliant floodplain management ordinance by that effective date or, if the community participates in the NFIP, risk suspension from the NFIP. In the first three quarters of FY06, FEMA issued 596 LFDs. Of these, 438 were sent to communities that participate in the NFIP and the remaining 158 were sent to non-participating communities. This means that 438 individual participating communities were required to review and possibly update their local floodplain management ordinance to ensure it meets the minimum criteria of the NFIP, as well as adopt the new or revised Flood Insurance Rate Maps (FIRMs) and Flood Insurance Study, or risk suspension from the NFIP. Out of the 438 communities, FEMA suspended 23 of those 438 communities for “failure to adopt”

the maps by the FIRM effective date, meaning that, in the first three quarters of FY06, approximately 95 percent of participating communities receiving a new or revised study had adopted the maps.

Table 6-4. KPI 2: Projected Population with Adopted Maps through FY06 (As of June 30, 2006)

Region	Counties with Adopted Maps	Population Total with Adopted Maps*	Percent of Population with Adopted Maps
1	4	1,318,660	9%
2	6	7,581,549	24%
3	50	7,635,639	27%
4	102	15,177,831	29%
5	19	9,792,357	20%
6	12	2,928,459	9%
7	41	2,241,548	17%
8	21	2,088,567	22%
9	13	13,770,681	32%
10	5	2,754,221	25%
Total	273	65,289,512	23%

* Population includes areas of counties not yet studied in their entirety

6.2.3 KPI 3: Percentage of Leveraged Contributions toward Digital Flood Data

Information on leveraged dollars is collected annually after the end of the fiscal year; thus, table 6-5 presents FEMA's FY05 success in exceeding KPI 3, percentage of leveraged contributions toward digital flood data. FEMA reported that almost \$53 million were leveraged from local, non-FEMA sources for Flood Map Modernization in FY05, nearly doubling the target of 20 percent.

Table 6-5. KPI 3: Percentage of Leveraged Contributions toward Digital Data for FY05

REGION	Number of Contributors	Total Effort Leveraged from Contributors	Percent of Effort Leveraged from Contributors*
1	15	\$1,516,086	28.5%
2	2	\$2,576,640	22.9%
3	17	\$1,167,359	9.3%
4	26	\$22,396,357	60.1%
5	6	\$6,168,821	37.8%
6	28	\$3,986,276	14.0%
7	4	\$5,327,422	56.0%
8	12	\$1,945,443	23.6%
9	19	\$3,909,230	26.9%
10	9	\$4,039,891	78.6%
Total	138	\$52,866,924	35.6%

* Source: FY 2005 Annual Partnership Report

6.2.4 KPI 4: Percentage of Appropriated Funds Sent to CTPs

Information on funding sent to CTPs is collected annually after the end of the fiscal year; thus, table 6-6 presents FEMA’s FY05 progress toward meeting the KPI 4 target, funding sent to CTPs by FEMA. FEMA reported that 40 percent of funds were sent to CTPs in FY05, easily exceeding the KPI 4 target of 25 percent.

Table 6-6. KPI 4: Percentage of Appropriated Funds Sent to CTPs in FY05

Region	Number of CTPs Receiving Funds	Total Funds Sent to CTPs	Percent of Funds Sent to CTPs*
1	3	\$670,661	12.6%
2	1	\$2,000,000	17.7%
3	15	\$2,510,000	20.0%
4	10	\$32,861,570	88.2%
5	9	\$7,838,622	48.1%
6	5	\$1,789,000	6.3%
7	4	\$3,182,946	33.5%
8	8	\$5,645,730	68.5%
9	2	\$1,103,982	7.6%
10	4	\$2,099,150	40.8%
Total	61	\$59,701,661	40.2%

* Source: FY 2005 Annual Partnership Report

6.3 KPI Projections for FY06 through FY08

The current data shows that FEMA will near the FY06 targets for KPIs 1 and 2 and FEMA currently anticipates meeting the KPIs for future fiscal years.

6.3.1 KPI 1: Population with Digital GIS Flood Data Available Online

The targets for KPIs 1 and 2 were revised as a result of the Mid-Course Adjustment described in this MHIP; as a result of the change in Flood Map Modernization focus and in recognition of potential risks to the mapping schedule described in section 5.7, the KPI 1 target for FY06 was maintained at 50 percent. The new targets are shown in figure 6-1 below.

Figure 6-1 indicates that according to the plan, GIS flood data will be available for 49 percent of the population by the end of FY06. This falls short of the KPI target, although it is a substantial increase from FY05. According to the current sequencing data, FEMA predicts that 88 percent of NFIP communities will have preliminary maps by FY08.

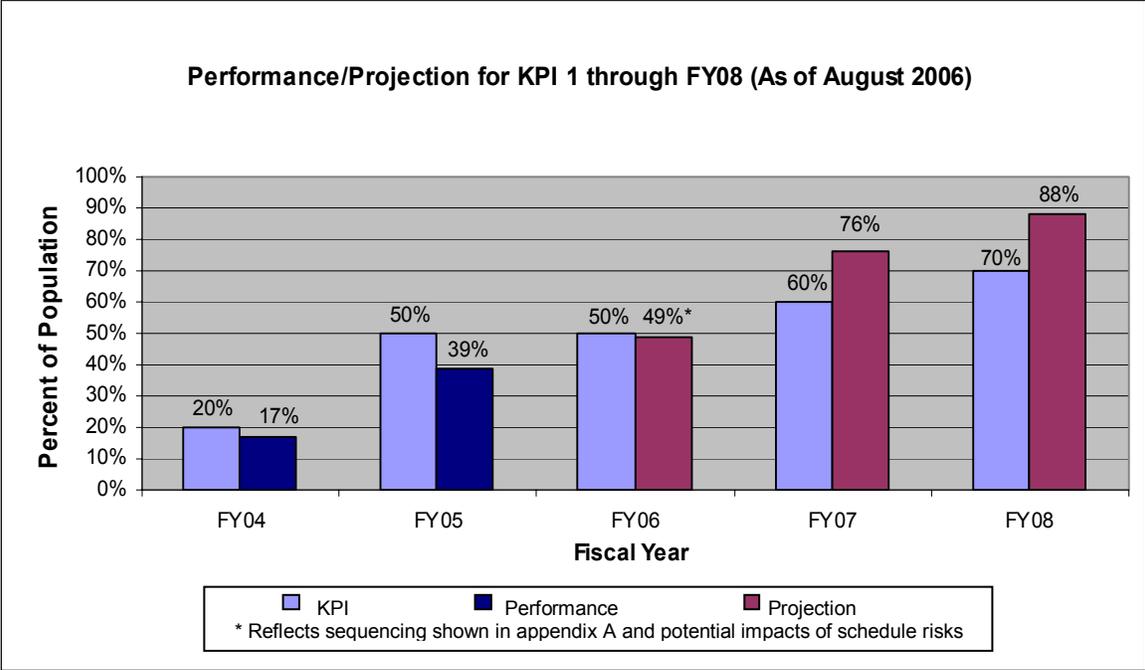


Figure 6-1. Performance/Projection for KPI 1 through FY08

6.3.2 KPI 2: Population with Adopted Maps that Meet Quality Standards

Based on the Mid-Course Adjustment and in recognition of potential risks to the map production schedule, FEMA has modified KPI 2 targets. Figure 6-2 shows that by the end of FY06, adopted maps will be available for 23 percent of the population. Based on current sequencing data, FEMA anticipates that 68 percent of NFIP communities will have adopted maps by FY08.

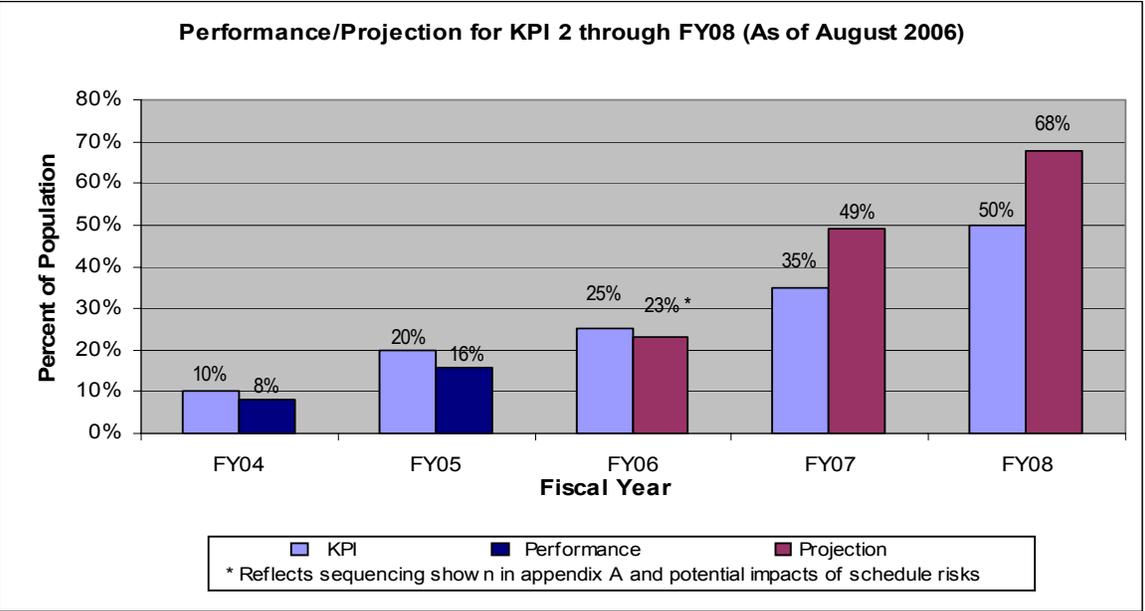


Figure 6-2. Performance/Projection for KPI 2 through FY08

6.3.3 Overall Progress through FY08

Table 6-7 shows the current projections toward meeting the targets for all four KPIs, based on the current sequencing data. FEMA expects to meet the targets for KPIs 1 and 2 in FY07-FY08. It appears that FEMA will meet the KPI targets, as revised by the Mid-Course Adjustment by the end of Flood Map Modernization. This assumes that nearly all studies proceed as scheduled as data becomes available. However, it is important to note that the KPI 1 and 2 projections for FY07-FY08 (also shown in figures 6-1 and 6-2, above) may be high because potential risks to the mapping schedule have yet to be identified. In addition, the FY06 projections for these KPIs are closer to the targets because the potential risks to the mapping schedule have already been identified.

Table 6-7. Comparison of KPIs and Performance/Projected Performance

KPI	FY04 ¹		FY05 ¹		FY06 ²		FY07 ³		FY08 ³	
	KPI	Perf.	KPI	Perf.	KPI	Proj.	KPI	Proj.	KPI	Proj.
KPI 1: Percentage of population with digital GIS flood data available online	20%	17%	50%	39%	50%	49%	60%	76%	70%	88%
KPI 2: Percentage of population with adopted maps that meet quality standards	10%	8%	20%	16%	25%	23%	35%	49%	50%	68%
KPI 3: Percentage of leveraged contributions toward digital flood data	20%	37%	20%	36%	20%	27%	20%	32%	20%	30%
KPI 4: Percentage of appropriated funds sent to CTPs	20%	38%	25%	40%	33%*	39%	33%*	40%	33%*	40%

Note: KPI 1 and KPI 2 are cumulative. KPI 3 and KPI 4 are annual.

* - These targets for FY06-FY08 depend on the ability to develop local and State capability. There are significant assumptions in KPI 4 and FEMA is examining strategies to achieve the target numbers.

1 – Actual

2 – Proposed; based on sequencing data and potential risks to map production schedule

3 – Proposed, based on sequencing data