January 31, 2005

Mr. David I. Maurstad
Director, Mitigation Division
Federal Emergency Management Agency
500 C. Street S.W.
Washington, DC 20472

Dear Mr. Maurstad:

Thank you for the opportunity to comment on FEMA’s Multi-Year Flood Hazard Identification Plan (MHIP). The MHIP represents a tremendous achievement in that it for the first time outlines in a single public document FEMA’s objectives and initial plan for implementing the Map Modernization Program. While the MHIP is a great accomplishment, it is our opinion that there are serious flaws in some of the policy decisions outlined in the MHIP, and the prioritization criteria that were used to distribute mapping funds throughout the nation. The Commonwealth of Massachusetts, through the Department of Conservation and Recreation’s Flood Hazard Management Program (FHMP), is committed to working with FEMA to effectively and efficiently implement the Map Modernization Program in Massachusetts.

To this end, the FHMP worked hard with our FEMA regional office and state mapping partners to develop a business plan that evaluated mapping needs in Massachusetts and developed an approach to meet those needs. Restudies were recommended only in locations where serious mapping problems had already been identified in MNUSS or through Community Assistance Visits, in coastal areas where the maps were greater than 15 years old, or where there was a high incidence of Letters of Map Change as a percentage of flood insurance policies. The remaining areas were assigned what was referred to at that time as a “Level 1” update, consisting of digital conversion of existing data with limited corrections to address obvious errors, discrepancies at community boundaries, etc. The approach taken was not a “Cadillac approach” but rather carefully analyzed the needs throughout the state. In fact, only one-third of the map panels in the state were recommended for restudy, with the remaining two-thirds recommended for Level 1 updates. The plan estimated a total cost of $34 million to produce those maps. However, the MHIP identifies only $7 million in funding for Massachusetts over the next five years.

The inadequacy of the level of funding being provided is compounded by FEMA’s decision to produce new digital flood maps, or DFIRMs, for the entire state within the five-year period and $7 million in funding assigned. This results in funding being spread so thin throughout the state that there is no choice other than to digitize flood
data that is well known to be out-of-date and inaccurate. We believe that this approach will not provide local officials with the tools that they so desperately need to review and regulate development. Instead we will be providing them with new-looking maps that are merely a repackaging of dangerously outdated flood hazard data. A better approach would be to allow the state and FEMA regional office to apply the current funding to properly address the areas of highest risk and with the greatest need for new mapping data, and produce quality products for those areas. The remaining areas could then be mapped by extending the Map Modernization Program beyond its current 5-year timeframe.

We believe that the decision to produce digital maps now for the entire state is shortsighted for a number of reasons. First, the existing flood maps in Massachusetts are outrageously outdated. As of March 2004, the average age of a flood insurance map in Massachusetts was 18.9 years. This age is based on the effective date of the map, so in reality the age of the flood hazard data contained in the maps is well over 20 years, on average. This includes a large percentage of our coastal communities. Virtually all of the state’s coastline must be completely remapped, as there have been dramatic changes in the methodologies used for coastal studies. Inland, some of the existing data can be used, but as a minimum the physical changes of 20 years must be taken into account.

We also believe this decision is not wise in developing and maintaining strong working relationships with our community mapping partners. Many of our communities have for years expressed dissatisfaction with their FIRMs, in many cases describing specific errors and deficiencies in those maps. In many cases they have been told that correction of these deficiencies was limited by FEMA mapping budgets and resolution would have to wait until the Map Modernization Program. If we now go back to these very communities with DFIRMs that incorporate the same deficiencies that they have known about for years, we fear our relationship with them will be permanently damaged. We would be much better served by making sure that we have sufficient funding to at least correct all known discrepancies when we produce a countywide DFIRM. This can only be accomplished if we delay some counties to beyond the 5-year timeframe of the MHIP.

Lastly, we believe that doing a partial effort and returning several years later to complete that effort is an inefficient use of resources. A large portion of the costs in a map revision are fixed or nearly fixed costs related to contracting costs, scoping, community outreach and coordination, and map production. It would be much more efficient to incur these costs only once in a complete, comprehensive remapping effort. Our communities have similar fixed costs related to public outreach, map review, and ordinance revision. We should not force them to incur these costs any more often than is absolutely necessary.

We have serious doubts as to whether the funding allocated to Massachusetts over the next 5 years is sufficient to provide digitized maps with even the limited amount of error checking that was envisioned in Level 1 updates. Our state estimates that when repaneling schemes associated with the use of orthophoto digital base mapping is applied, there will be a total of 2,765 map panels in Massachusetts. With a total funding of $7 million, that equates to just over $2500 in funding per panel statewide. The standard cost estimate used by Dewberry for Level 1 updates was $6750 per panel. While we believe
this estimate may be able to be reduced through the use of improved automated mapping techniques, it is important to note that many of these techniques, particularly related to hydraulic analyses, will likely not be usable in Massachusetts because of the large number of hydraulic control structures, such as bridges and dams, which determine stream profiles. In many cases these structures must be individually surveyed and hydraulically modeled in order to produce decent results.

The FHMP believes that the methodology used to distribute mapping funds to the ten FEMA regions and ultimately to states was flawed in several areas as well. First and most importantly, it appears that the existing quality of the maps was never taken into account as one of the parameters. It appears obvious to us that a 20-year old map in a moderate risk area should be a higher priority for map revision than a 2-year old map in a high risk area. While the age of a map is not the only determining factor as to the quality of an existing map, it was determined to be a good starting point in the development of our priorities in our state business plan, as is the most easily measured. Other parameters such as the incidence of Letters of Map Change could also be incorporated into a measure of existing map quality.

Use of population and population growth as a means to measure the amount of development in a county is inaccurate as well. A much better parameter to use would be number of building starts, or number of building permits issued. Many of our high development areas in Massachusetts are coastal areas with a high seasonal population, such as Barnstable (Cape Cod), Dukes (Martha’s Vineyard), and Nantucket Counties. This high seasonal population is not accounted for in the population parameters used. Further, a large amount of redevelopment is occurring through what is commonly referred to as “McMansionization,” where small cottages and homes, which are mostly pre-FIRM structures are either demolished and rebuilt or merely substantially improved into larger post-FIRM homes. This development is also not accounted for in the population and population growth parameters.

We appreciate the opportunity to comment on the MHIP and respectfully request that FEMA consider our comments in producing the next version of the MHIP. If you have any questions about the enclosed comments or would like to discuss our comments in more detail, please feel free to contact me at Richard.Zingarelli@state.ma.us or at (617) 626-1406.

Sincerely,

Richard R. Zingarelli
State NFIP Coordinator and
Acting State Hazard Mitigation Officer

cc: Mike Howard, FEMA
    Mike Goetz, FEMA Region I
    ASFPM