The Association of State Floodplain Managers is pleased to join with many other witnesses in supporting investment in the nation’s infrastructure as a way to provide economic stimulus, to create and sustain jobs, and to address a national need to repair, and upgrade our infrastructure so it is sustainable in the future. For those familiar with our previous statements this may seem to be a departure from our prior positions that infrastructure investments and maintenance is primarily a non-federal responsibility. In the long term we continue to promote local and state responsibility for these investments but we also recognize the value and the win-win impact these federal investments will have on moving our nation forward through difficult economic times that we have not experienced since the great depression.

We urge all to consider the lessons learned from similar investments of the 1930s so that long term problems are avoided. One such lesson is that infrastructure investment that ignores the creation of threats to life and property from natural hazards continues to undermine investment choices and furthers the dependency of all on Federal tax payer dollars. We are grateful to the Committee for its leadership in exploring the important, sustained role that infrastructure work can play in our economic recovery.
The Association of State Floodplain Managers (ASFPM) and its 27 State Chapters represent over 13,000 state and local officials and other professionals who are engaged in all aspects of floodplain management and hazard mitigation including management, mapping, engineering, planning, community development, hydrology, forecasting, emergency response, water resources and insurance. All ASFPM members are concerned with reducing our nation’s flood-related losses. Our state and local officials are the federal government’s partners in implementing programs and working to achieve effectiveness in meeting our shared objectives. Many of our members are designated by their governors to coordinate the National Flood Insurance Program (NFIP); many others are involved in the administration of and participation in FEMA’s hazard mitigation grant programs; and others are involved in the array of flood mitigation programs/projects made available through the U.S. Army Corps of Engineers (USACE). Additional information about the association is available at: www.floods.org.

The nation has significant and well documented needs for repair, improvement and expansion of many elements of its infrastructure. Due to the nation’s current economic situation, unemployment is rising and many economic experts believe that at a minimum another legislative stimulus package is necessary. There seems to be growing interest in federal investment in our nation’s infrastructure. In this regard, it is interesting to note the comments of Paul Krugman, winner of this year’s Nobel Prize in Economics, in his New York Times column of October 17:

“And this is … a good time to engage in some serious infrastructure spending, which the country badly needs in any case. The usual argument against public works as economic stimulus is that they take too long: by the time you get around to repairing that bridge and upgrading that rail line, the slump is over and the stimulus isn’t needed. Well, that argument has no force now, since the chances that this slump will be over anytime soon are virtually nil. So let’s get those projects rolling.”

Others have pointed out that such longer term investment in infrastructure can continue to stimulate the economy over a longer period of time and to both create and sustain jobs. This direction seems to 1) hold promise for needed economic stimulus both short and long-term, 2) be likely to create and sustain jobs and 3) to result in tangible products that will fill unmet needs and serve the nation well into the future. It seems that this stimulus will significantly stabilize the economy through this genuine investment in necessary infrastructure improvements.
In addition to the often-mentioned infrastructure needs associated with roads, bridges, transit systems, railways, aviation and flood protection systems, specific focus is also needed in the following areas:

- **Drinking water and wastewater utilities**: A significant water infrastructure “investment gap” should be addressed;

- **Coastal water infrastructure and storm damage reduction structures**: These structures are increasingly challenged by age, sea level rise and increasingly frequent and severe storms. Many dams and levees throughout the nation are in states of serious disrepair, compromising their reliability. Improved risk identification must continue as a corollary to needed repairs and improvements.; and

- **Green infrastructure systems that absorb storm impacts and increase natural habitats**: This includes preservation of natural wetland, bayou and forest habitats adjacent to our coasts and riverine systems. Emphasis should be placed on conservation of existing resources as well as investment in restoration and creation of critical wetlands. Stormwater management facilities such as wet and dry ponds and rain gardens can increase stormwater storage capacity in our urban areas as well as improve water quality.

If the nation is to embark on a major infrastructure effort, ASFPM strongly urges that the following points should be included:

1. **Natural hazards mitigation must be built into each infrastructure project so that all infrastructure investment reflects consideration of public safety and property loss reduction both now and for future generations.** It is essential to consider hazard mitigation in the design to allow maintenance of critical societal function immediately after a disaster and minimize lengthy repair and replacement processes. Examples would include bridges designed to avoid debris pile-up or highways designed to manage stormwater runoff. Such considerations are not consistently part of project planning despite their obvious benefits for avoidance of unnecessary future damages and losses. A recent study by the National Institute of Building Sciences found that every $1 invested in mitigation yields $4 in future losses avoided;
2. Critical infrastructure (hospitals, water supply, sewage treatment, bridges, key roads, etc) must be protected from natural hazards so they are operable during extreme events. This is especially true for flood events, where protection to the minimal level represented by the 100 year flood elevation is inadequate. A 500 year flood level of protection and operability must be included. All critical facilities must be built to the International Code Council (ICC) code standards whether the local government has adopted such building codes or not. Events during the last three years have clearly illustrated the catastrophic consequences to life and property when these considerations are not included. Local, state and national treasuries have been severely depleted because infrastructure had not been mitigated against flood and coastal hazards;

3. Design all key road systems with bridges and culverts to accommodate water and debris from the 500-year storm to maximize accessibility and operability including during times of extreme events. This is essential to national security and community sustainability;

4. A key element in infrastructure planning is knowledge of the severity of the potential hazard and where the hazard will occur. For that reason the nation must continue to invest in our flood mapping program so we have accurate information on the 100 and 500 year flood levels.

5. Ensure flood proofing and redundancy for critical utility systems, specifically water, electric, sewer, and natural gas; and

6. Emphasize sustainability when rebuilding our infrastructure. If natural hazards, and appropriate hazard events are not taken into account, the nation’s taxpayers will repeatedly be rebuilding this infrastructure. There may be instances where it is simply not sustainable to rebuild infrastructure in very high hazard areas and other options such as relocation should be considered. Some provision must be made for ongoing operation and maintenance of infrastructure. Improper or insufficient maintenance has led to many of the current repair needs. We must avoid wasteful repetition of this problem.

In conclusion, the Association of State Floodplain Managers strongly endorses the call for increased investment in this nation’s infrastructure to provide much needed economic stimulus in a way that both creates jobs and contributes to our national and economic security by developing, improving and repairing our infrastructure. Dr. Gilbert F. White, a flood policy visionary respected world wide by scientists, policy makers and elected leaders, worked in the Roosevelt administration in the Office of
Budget. During similar deliberations on flood control investments in the 1930’s, Gilbert advised President Roosevelt that investments in infrastructure alone without seeking opportunities to more appropriately manage risk to property and people would lead to the creation of more flooding problems. The President recognized the soundness of Gilbert’s advice but was under immense pressure to invest in more traditional infrastructure. Gilbert’s guidance was prophetic, and we once more are at a point in history where we are debating these very same issues. We strongly support a properly structured stimulus package for infrastructure but we stress that this investment must include hazard mitigation in the design of all critical facilities to ensure that the investment endures over time and is operable during severe weather events, emergencies and disasters.