DRBC Flood Advisory Committee (FAC) Recommendations for more Effective Floodplain Regulations in the Delaware River Basin, October 2009

SUMMARY:

The Flood Advisory Committee (FAC) presented a report containing twelve (12) recommendations for more effective floodplain regulations to the Commission in October 2009.

Flood damage potential is a function of human development in floodplains. The regulations currently in place for addressing development in the floodplain have not successfully reduced flood damages. In fact, existing regulations have continued to allow new development and redevelopment of flood-prone lands in the Basin. This has resulted in an increased population at risk.

The Committee determined that minimum floodplain management regulations, administered by FEMA through the National Flood Insurance Program, do not adequately identify risk or prevent harm. Although some states and communities in the Basin have adopted more stringent floodplain regulations, the committee recognized that floodplain regulations are inconsistent from State to State and from community to community.

The FAC recommends that floodplain regulations need to be applied more consistently and comprehensively, on a watershed basis that reaches across jurisdictional boundaries. A new minimum standard that is more stringent then the FEMA national minimum standards needs to be applied in the Delaware River Basin.

Below is a brief summary of the twelve (12) FAC recommendations:

A. Regulatory Floodplain Definition:

1. The regulatory floodplain for waterways in the Delaware River Basin should be greater than the 1% annual chance (previously known as the 100-year) floodplain.
2. Unmapped waterways of the Basin need a mechanism for identifying the regulatory floodplain.

B. Floodway Definition:

The floodway in the Delaware River Basin should be defined by a 0.2 foot rise standard for main stem Delaware River and all other streams and rivers within the basin. The floodway is currently defined as a less restrictive 1.0 foot rise.

C. Development/Fill in the Flood Fringe:

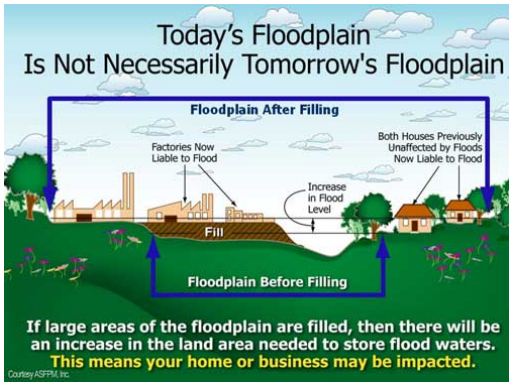
Protect the flood fringe in a naturally vegetated state and limit development including, but not limited to, structures, infrastructure, impervious surfaces, fill, grading and removal of vegetation.

D. Development/Fill in the Floodway:

New development in floodways should be prohibited.

E. Stream/Riparian Corridors and Vegetation Disturbance:

Incorporate the buffer concept as part of a comprehensive floodplain management program to protect communities from flood damage.



F. Adopted Building Code:
Continue the adoption of International Codes issued by the International Code Council.

G. Standards for the Lowest Habitable Floor of Structures (Freeboard):
All new substantially improved residential, institutional and commercial structures within the Delaware River Basin should be constructed two (2) feet above 1% annual chance base flood elevation.

H. Enclosed Areas below Flood Elevation:
1. Deed restriction should be required for enclosures.
2. Structural requirement: If the enclosure below the flood elevation is greater than 6 feet in height measured from floor to floor, at least 25 percent of the surface area of the outer wall of enclosures should be left permanently open.

I. Substantial Damage/Improvement to Structures:
1. Cumulative Substantial Damage Declaration
2. Tracking of Cumulative Substantial Damage/Improvements

J. Dams and Flood Damage Risk:
1. Increase monitoring of dams. Dams with a clear and present danger of failure should be removed.
2. States should increase funding and assistance to small dam owners for evaluation and removal.
3. Hydraulic studies in the vicinity of high and medium hazard dams should be revisited to evaluate the change in flood hazard areas.
4. Completion of emergency action plans for high hazard and significant hazard dams must be prioritized. These plans contain inundation maps that identify flood hazard areas in cases of a dam failure.
5. Before a dam is removed, hydraulics must be revisited to evaluate the adequacy of downstream drainage structures, and the accuracy of upstream floodplain maps.
6. Require the evaluation of downstream flooding impacts as part of the permit application process for dam decommissioning or dam repair which increases spillway capacity.

K. Bridge/Culvert Construction or Reconstruction and Flood Damage Risk:
1. Design new bridges and culverts to ensure that flooding to existing buildings or facilities is not exacerbated upstream or downstream. Design should be based on the results of updated flood models using recent climate data that incorporates changing precipitation trends.
2. Maps should be updated for new crossings.

L. Stormwater Regulations - New and Redevelopment:
The goal of stormwater design within the Delaware River Basin should mimic pre-development hydrology at a minimum.

The full report and background on the Subcommittee that advised the FAC can be viewed online at:
http://www.nj.gov/drbc/programs/flood/floodplainregs.html

OPTIONS FOR IMPLEMENTATION:

The Commission shall revise its existing Basin Flood Plain Regulations (FPR), adopted on November 10, 1976 to incorporate the recommendations below. The Commission shall encourage states and local governments to adopt, implement and enforce standards and regulations that are at least as stringent as those in the existing or amended Commission Basin FPR. Upon approval of State and local flood plain standards and regulations that are at least as stringent as those in the existing or amended Commission Basin FPR (see FPR Sections 6-2.1 and 6.4.1), the Commission may enter into agreements with such State and local governments providing them primacy in the areas covered by the Commission's Basin Flood Plain Regulations. State NFIP Coordinator's Offices would work with and provide guidance to local governments to assist them in the adoption of such standards and regulations.

Options for New Minimum Standard:

1) Implement All Recommendations This includes:
   - Expand floodplain and floodway definitions
   - 100' vegetated buffer or variable-design buffer program
   - More stringent restrictions in floodway:
     a. No fill or removal of vegetation
     b. No development
   - More stringent restrictions in flood fringe:
     a. Permit only passive uses
     b. Limit new structures to maximum extent possible
     c. 0% net fill
     d. Require critical facilities to be placed outside 0.2% annual chance floodplain (500-yr.)
     e. Require any new structures to be built 2' above BFE (Require a deed restriction for any enclosures)
   - Expand restrictions to tidal reach:
     a. Require critical facilities to be placed outside mapped hurricane surge areas
     b. Restrict fill placement in tidal areas
   - Require peak rate control to guard main stem

2) Implement Some
   A. Keep regulatory floodplain as is, <u>but expand floodway</u>

   B. Keep regulatory floodplain as is, <u>but expand floodway on main stem only</u>

   C. Keep existing regulatory floodplain and floodway

   Despite differing definitions of floodplain/flood fringe, all three above (A-C) would implement:
   - 100' vegetated buffer or variable-design buffer program
   - More stringent restrictions in floodway and flood fringe (see No. 1)
   - Expand restrictions to tidal reach (see No. 1)
   - Require peak rate control to guard main stem

3) Implement None, Status Quo