

July 30, 2010

Darcie McGee  
Environmental Resources Management  
Natural Resources Management Office  
2725 Judge Fran Jamieson Way, Bldg. A, Room 219  
Viera, FL 32940

Re: Flood Hazard Areas and Wetlands Working Group,

Dear Darcie and Working Group:

Per County Resolution 10-101, our group was formed to review the Brevard County Comprehensive Plan, specifically addressing Objective 4, Flood Hazard Areas and Objective 5, Wetlands with the power and duty to evaluate current standards, requirements, policies, processes, and procedures.

This letter is prepared to specifically address Objective 4, Flood Hazard Areas.

Many on the working group have a need for reasonable protocols for establishing density and land development restrictions. Per Board direction, staff will be doing a matrix for Indian River & Volusia Counties. Group members have provided Osceola & Sarasota Counties regulations in order to compare adjacent and other leading community policies on regional floodplain policies.

The National Flood Insurance Program (NFIP) Community Rating System (CRS) criteria should also be given a primary importance in the working group consideration. According to statistics for April 2010, from FEMA's website, (Reference: <http://www.fema.gov/business/nfip/statistics/stats.shtm> ), Brevardians have almost 28,000 flood policies in force, with written premiums in-force exceeding \$10 million. Brevard County participates in this program and their CRS Class 7 status allows 15% premium discounts, matching or exceeding discounts for the municipalities within the County. The adjacent communities of Orange County (Class 5), Daytona Beach (Class 6) , Indian River County (Class 6), Volusia County (Class 6) allow premium discounts of 5% to 10% more than Brevard.

The goals of County policy overlap the CRS goals (i.e. encourage a comprehensive approach to floodplain management) and can realize millions of dollars in premiums if additional classification credits can be realized.

Attached is a draft of Brevard Comp Plan Objective 4, following the CRS outline for floodplain management. The CRS approach falls into 4 categories of credits; public information, mapping and regulations, flood damage reduction, and flood preparedness. The draft shows point systems that are assigned as credits.

If the working group believes that this approach has benefit (i.e. following the CRS outline for Comp Plan policy), I would be happy to work with staff to further develop this Objective 4 to include the matrix of the adjacent densities and development restrictions for the groups review and consideration. This could be considered at future meetings, rather than trying to take a vote at Monday's (August 2, 2010)

meeting. I will continue to work on this prior to the meeting on Monday, but wanted to submit the draft for a first consideration.

Again, a large weakness in the current policy is the lack of data to differentiate the elevation divisions for 25-year, 10-year and mean annual floodplain. (Recall that the best available data is referenced as Technical Publication SJ 85-3, The Mean Annual, 10-year, 25-year and 100-year flood profiles for the Upper SJR Under the Existing Conditions, dated March 1985, by Dr. Donthamsetti Rao, P.E. In the abstract and introduction, Dr. Rao explains that the information is for “current” basin conditions, synthetic streamflow data was generated for a period of 35 years (1949 – 1983) by continuous hydrologic simulation. 7 USGS stream gaging stations were used, only 3 of them gaging discharge, for the study area from Florida Turnpike to Lake Harney. Certainly, there have been many altered factors since this evaluation in 1985!)

If the policy is re-written with the CRS guidelines in mind, Brevard’s class rating could potentially improve and arguably that would be very beneficial for Brevard County floodplain protection and constituents alike.

The following draft is based on the CRS outline, but needs comparison to the existing rating documentation/ordinances to see where additional references can be included. The numbers in parentheses after the Policy indicate the CRS Series Number (for reference). Additional CRS information can be found at :

- The FEMA CRS home page: <http://www.fema.gov/business/nfip/crs.shtm>
- The current CRS Coordinator’s Manual: <http://www.fema.gov/library/viewRecord.do?id=2434>

Please note that all the restriction provisions do not have to be made, and the point system helps provide a weight of the “worthiness” in the program review. There is still a lot of work to be done here, but it can really be a win-win if we are able to get this set up.

Thank you for your consideration.

Carol Noble, P.E.

## **Flood Hazard Areas**

### **Objective 4**

**Brevard County shall minimize the occurrence of flooding that is a threat to human health or property. This objective shall be made measurable by implementing programs to provide public information, to provide increased flood protection for new development, to provide reduction in flood risk to existing developments and to participate in flood preparedness programs.**

#### **Policy 4.1**

**Brevard County shall continue to participate in the National Flood Insurance Program Community Rating System in order to encourage a comprehensive approach to floodplain management and strive to attain the maximum benefits for the citizens of Brevard County.**

##### **Policy 4.1.1 (310)**

**Brevard County shall continue to maintain records of flood data and elevations of new, substantially improved and substantially damaged buildings on FEMA's elevation certificate. (162 points max)**

##### **Policy 4.1.2 (320)**

**Brevard County shall continue to respond to requests from the public in regards to Flood Insurance Rate Maps (FIRMs). (140 points max)**

##### **Policy 4.1.3 (330)**

**Brevard County shall continue outreach projects to advise citizens of flood hazards, the availability of flood insurance and/or flood protection methods. (380 points max)**

##### **Policy 4.1.4 (340)**

**Brevard County shall continue to provide leadership to expand hazard disclosure for flood-prone properties. (81 points max)**

##### **Policy 4.1.5 (350)**

**Brevard County shall provide flood-related information to residents through local libraries and community websites. (102 points max)**

##### **Policy 4.1.6 (360)**

**Brevard County provide flood protection assistance by providing interested property owners with general information that responds to their needs. (71 points max)**

##### **Policy 4.1.7 (410)**

**Brevard County shall continue to strive to develop mapping and regulatory standards to address special hazard areas/local situations in which flooding or flood-related problems occur. (1,346 points max)**

**Policy 4.1.8.1 (420)**

Brevard County shall continue to preserve vacant land in the floodplain as open space. These areas shall be preserved as open space either by public ownership or by development restrictions that prohibit buildings and filling. The areas can be public parks, private preserves, playing fields, golf courses, or other uses provided that the owner documents that the land will stay as open space. Parcels larger than 10 acres may have one building that is a necessary appurtenance to open space use, such as a restroom facility, ranger's cabin, or bleachers (Ord \_\_). (900 points max)

**Policy 4.1.8.2 (420)**

Brevard County shall continue to update the community's Special Flood Hazard Area (SFHA) and strive to preserve these areas as open space, including provisions for deed restrictions prohibiting future building or filling on the property, retaining undeveloped natural state and restoration of SFHA to natural state. (2,740 points max)

**Policy 4.1.9 (430)**

Brevard County shall continue to establish flood elevations within basins with stormwater master plans. Based on new information, the County shall revise, as necessary, minimum building pad elevations and modify existing land development regulations in the Land Development Code (Ord \_\_). (2,740 points max)

**Policy 4.1.9.1**

Brevard County Floodplain management ordinance requires freeboard for all new buildings and substantial improvements (i.e. all new buildings (and their furnaces, utilities, ductwork, etc.) elevated or floodproofed to a level at least 1 foot above the base flood elevation) (Ord. \_\_). (60 points)

**Policy 4.1.9.2**

Brevard County floodplain management ordinance requires new buildings in the floodplain to be constructed on properly designed and compacted fill extending beyond the building walls before dropping below the base flood elevation and include appropriate protection from erosion and scour (Ord. ). (15 points)

**Policy 4.1.9.3**

Brevard County floodplain management ordinance requires that all improvements, modifications, additions and reconstruction projects to an existing building be counted cumulatively over a period of at least 5 years. (Once the total cost of all projects reach 50% of the buildings value, the project is considered a substantial improvement and the building is treated as a new building and must be elevated). All additions to building (regardless of size) must be elevated above the base flood elevation (Ord. \_\_). (40 points)

**Policy 4.1.9.4**

Brevard County floodplain management ordinance provides that the threshold for substantial improvement is less than 50% (18 points) (Ord \_\_). (18 points)

**Policy 4.1.9.6**

**Brevard County floodplain management ordinance prohibits/restricts critical facilities in the floodplain (Ord. \_\_\_\_). (40 points)**

**Policy 4.1.9.7**

**Brevard County floodplain management ordinance prohibits fill in the floodplain unless equal compensatory storage volumes are demonstrated. (Ord. \_\_\_\_). (60 points)**

**Policy 4.1.9.8**

**Brevard County floodplain management ordinance prohibits activities that are hazardous to public health and water quality in the floodplain, requires buffer areas along streams, or requires new floodplain developments to minimize disruption to shorelines or stream channels and their banks. (Ord. \_\_\_\_). (5 points)**

**Policy 4.1.9.9**

**Brevard County floodplain management ordinance prohibits/restricts building enclosures, including breakaway walls, below the base flood elevation (Ord \_\_\_\_). (40 points)**

**Policy 4.1.9.10**

**Brevard County floodplain ordinance regulations (portions) shall include regulations mandated by state law (Ord \_\_\_\_). (5 points).**

**Policy 4.1.9.11**

**Brevard County shall continue to strive to achieve a Building Code Effectiveness Grading Schedule of class 6 or better (10 points) and has adopted the International Residential Code or International Building Code (35 points each or 70 points for both codes).**

**Policy 4.1.9.12**

**Brevard County floodplain management ordinance shall require that all proposed development in the floodplain and certificates of occupancy for such projects are reviewed by a Certified Floodplain Manager (CFM) (25 points) or staff members (5 points each) that are CFM or have graduated from the Emergency Management Institute courses on Managing Floodplain Development or Coastal Construction (25 points max). (Ord \_\_\_\_).**

**Policy 4.1.9.13**

**Where manufactured homes parks are located where the base flood elevation is more than 3 feet deep, Brevard County shall require any newly placed manufactured homes to be elevated above the base flood elevation (Ord \_\_\_\_). (25 points).**

**Policy 4.1.9.14**

**Brevard County has mapped or otherwise designated the community's coastal AE Zone (i.e. the coastal SFHA that is not mapped as V Zone) and requires all new**

buildings in the coastal AE Zone to meet the requirements for buildings in the V Zones and for openings in the A Zones (Ord \_\_\_\_). (50 points)

**Policy 4.1.10 (430LD)**

Brevard County shall continue to regulate floodplain development and encourage floodplain development avoidance to minimize construction in the floodplain, in addition to open space regulatory requirements

**Policy 4.1.10.1**

Brevard County shall continue to regulate developments to set aside floodplain areas as open space or drainage easements, require all new lots to be on natural ground, require cluster development, provide density transfers to flood-free sites or otherwise discourage new buildings in the floodplain (Ord \_\_\_\_). (25 points)

**Policy 4.1.10.2**

Brevard County shall continue to utilize zoning districts that require minimum lot sizes of 1 acres (Credit is provided if at least 5 acres of the floodplain in one or more zoning districts that requires a minimum lot size of 1 acre. This credit is available for land within low density zoning districts, as well as for areas developed in accordance with density requirements. For this credit, it does not matter why the area is zoned for low density; what counts is the minimum lot size allowed. Multiply the minimum lot size of the least-dense floodplain zoning district by 5 (the minimum lot size must be at least 1 acre. This is the credit value, up to 50 points).

**Policy 4.1.11 (440)**

Brevard County shall continue to keep flood and property data records electronically (up to 119 points), continue a formal program to maintain elevation marks and replace when needed (20 points) and maintain copies of all past FIRMs, Flood Insurance Studies, and Flood Boundary Floodway Maps (15 points). (239 points max)

**Policy 4.1.12 (450)**

Brevard County shall continue to regulate new development in watersheds (not just floodplain) to minimize the adverse impacts of stormwater runoff on downstream flooding and water quality (Ord \_\_\_\_). (670 points max)

**Policy 4.1.12.1**

Brevard County regulates with retention/detention requirements for new development in the watershed (not just the floodplain) for at least peak runoff of the 10-year or greater storm for new developments in the watershed be no greater than the runoff from the site in its pre-development condition (Ord \_\_\_\_). (25 points)

**Policy 4.1.12.2**

Brevard County has adopted a master plan that sets stormwater regulatory criteria for new development in the watershed (\_\_\_\_). (25 points)

**Policy 4.1.13 (510)**

**Brevard County shall continue to implement and update a comprehensive flood hazard mitigation plan using a standard planning process (\_\_\_). (359 points)**

**Policy 4.1.14 (520)**

**Brevard County shall consider methods for acquisition and/or relocation of flood-prone buildings so they are out of the floodplain. (3,200 points)**

**Policy 4.1.15 (530)**

**Brevard County shall consider protection of floodplain development by flood-proofing, elevation or minor structural projects. (2,800 max points)**

**Policy 4.1.16 (540)**

**Brevard County shall continue periodic inspections of channels, retention basins and continue debris removal programs (\_\_\_). (330 points)**