

ORDINANCE NO. <sup>14-15</sup> \_\_\_\_\_

AN ORDINANCE OF THE CITY OF KEY WEST, FLORIDA, PURSUANT TO SECTION 1.05(A) OF THE CHARTER OF THE CITY OF KEY WEST, FLORIDA, PROPOSING A REFERENDUM TO PERMIT AN AMENDMENT TO THE LAND DEVELOPMENT REGULATIONS TO PROVIDE AN EXCEPTION TO BUILDING HEIGHT REGULATIONS FOR THE SPECIFIC PURPOSE(S) OF PROTECTING HOMES AND POSSESSIONS DURING FLOOD EVENTS; TO MITIGATE RISING INSURANCE RATES; FACILITATE POTENTIAL FLOOD INSURANCE RATE DISCOUNTS CITYWIDE BY IMPROVING THE CITY'S COMMUNITY RATING SYSTEM STANDING; AND IN RESPONSE TO COMPREHENSIVE PLAN POLICIES RELATED TO ADAPTATION; SETTING THE GENERAL ELECTION OF NOVEMBER 4, 2014, AS THE DATE OF REFERENDUM; PROVIDING FOR SEVERABILITY; PROVIDING FOR REPEAL OF INCONSISTENT PROVISIONS; PROVIDING FOR AN EFFECTIVE DATE

WHEREAS, Key West Charter Section 1.05(A) provides that the building height restrictions in the land development regulations are subject to change only upon approval of the majority vote of the electors; and

WHEREAS, the City shall follow Florida Statutes Section 100.342 concerning notice of a referendum and Florida Statutes Section 101.161 concerning preparation of the referendum ballot; and

WHEREAS, the City Commission desires to obtain electorate approval to provide an exception for building height of not more than 4 feet above FEMA established flood levels, yet no more than 40 feet in height; and

WHEREAS, the City Commission desires that the proposed referendum appear on the General Election ballot of November 4, 2014.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY OF KEY WEST, FLORIDA:

Section 1: Pursuant to Key West Charter section 1.05 a referendum to permit an exception to building height restrictions within the land development regulations shall hereby be presented to the voters of Key West. The question appearing on the ballot shall have the following title: "Referendum - Exception To Building Height Regulations To Protect Properties From Flooding." The question appearing on the ballot shall be worded as follows:

To protect property against flooding and reduce flood insurance costs for taxpayers citywide, should the City permit an exception to building height regulations when buildings are voluntarily raised off the ground, up to four feet above FEMA established flood levels, yet no more than 40 feet in height?

\_\_\_\_\_  
YES

\_\_\_\_\_  
NO

Section 2: In the event of the passage of the proposed Referendum to allow an exception to the building height regulations for properties that voluntarily raise their buildings above flood levels, as set forth in section 1, above, Section 122-1149 of Division 3, of Article V, of Chapter 122, of the Key West Land Development Regulations shall be amended as follows:

Section. 122-1149. Height.

(a) The term "building height" as used in the land development regulations shall mean the vertical

distance from the crown of the nearest adjacent street to the highest point of the proposed building.

(b) Height limitations contained in the schedule of district regulations located in divisions 2 through 14 of article IV of this chapter, in division 2 of this article and in this division shall apply to all construction unless otherwise stated herein below and/or in section 122-1151.

(c) These height regulations may be waived subject to variance criteria found in Chapter 90-391 in order to accommodate non-habitable hardware and utility structures typically associated with the principal structure, including spires, belfries, cupolas, antennas, water tanks, ventilators, chimneys, or other appurtenances usually required to be placed above the roof level and not intended for human occupancy or use.

(d) Flood Protection Building Height Exception: An exception to the building height regulations as referenced in subsection (b) above may be permitted in cases where a building is raised above the ground to meet or exceed FEMA established base flood elevation levels under the following conditions:

1. Only the equivalent measurement of distance from the existing ground level, prior to infill, to the required base flood elevation of the building, and up to a maximum of four (4) feet above the base flood elevation, may exceed the building height regulations.
2. No exception shall result in a building height that would exceed 40 feet.

Section 3: The City Clerk is hereby authorized and instructed to take all necessary and proper action to place the referendum question set forth in Section 1, above, on the General Election ballot of November 4, 2014, 2014, and to provide notice of the referendum election as provided by law.

Section 4: If any section, provision, clause, phrase, or application of this Ordinance is held invalid or unconstitutional for any reason by any court of competent jurisdiction, the remaining provisions of this Ordinance shall be deemed severable therefrom and shall be construed as reasonable and necessary to achieve the lawful purposes of this Ordinance.

Section 5: All Ordinances or parts of Ordinances of said City in conflict with the provisions of this Ordinance are hereby superseded to the extent of such conflict.

Section 6: This Ordinance shall go into effect immediately upon its passage and adoption and authentication by the signature of the presiding officer and the Clerk of the Commission.

Read and passed on first reading at a regular meeting held this 5 day of August, 2014.

Read and passed on final reading at a regular meeting held this 19 day of August, 2014.

Authenticated by the presiding officer and Clerk of the Commission on 20 day of August, 2014.

Filed with the Clerk August 20, 2014.

Mayor Craig Cates	<u>Yes</u>
Vice Mayor Mark Rossi	<u>Yes</u>
Commissioner Teri Johnston	<u>Yes</u>
Commissioner Clayton Lopez	<u>Yes</u>
Commissioner Billy Wardlow	<u>Yes</u>
Commissioner Jimmy Weekley	<u>Yes</u>
Commissioner Tony Yaniz	<u>Yes</u>

  
CRAIG CATES, MAYOR

ATTEST:

  
CHERYL SMITH, CITY CLERK

## EXECUTIVE SUMMARY



**To:** Jim Scholl, Interim City Manager

**Through:** Donald Leland Craig, AICP  
Director of Community Development Services

**From:** Nicole Malo, AICP, LEED GA  
Planner II

**Meeting Date:** July 1, 2014

**RE:** Flood Protection Building Height Referendum Language

### Action Statement:

Consistent with the City Charter that requires a positive vote of a referendum in order to change building height regulations, this request is to approve the proposed language for a flood protection building height referendum to be placed on ballot for the November 3, 2014 general election:

*To protect property against flooding and reduce flood insurance costs for taxpayers citywide, should the City permit an exception to building height regulations when buildings are voluntarily raised off the ground, up to four feet above FEMA established flood levels, yet no more than 40' in height?*

If the referendum is approved by the electorate, the Land Development Regulations must follow the regulated approval process which requires Planning Board and City Commission approval. The proposed Land Development Regulation amendment associated with this referendum is proposed as follows:

Section. 122-1149. Height.

- (a) Flood Protection Building Height Exception: An exception to the building height regulations as referenced in subsection (b) above may be permitted in cases where a building is raised above the ground to meet or exceed FEMA established base flood elevation levels under the following conditions:
1. Only the equivalent measurement of distance from the existing ground level, prior to infill, to the required base flood elevation of the building, and up to a maximum of four (4) feet above the base flood elevation, may exceed the building height regulations.
  2. No exception shall result in a building height that would exceed 40 feet.

### Consistency with the Strategic Plan

The referendum approach is consistent with the intent of all chapters of the Strategic Plan including: The Environment; The Economy; Infrastructure; Government; and Quality of Life.

**Purpose:**

The City Charter prohibits any change to the existing building height regulations without voter approval. The majority of land within the City is already developed and property owners may experience difficulty raising an existing structure to protect their homes and businesses from rising sea levels, increased flooding and meet FEMA structural requirements without exceeding the building height limitation (Please see Attachment B for additional information). The purpose of this flood protection building height referendum is to permit an exception to existing building height regulations for buildings that are raised above flood hazard levels in order to: **help property owners protect their homes and valuables during flood events; mitigate rising insurance rates from the 2012 Biggert-Waters Act; facilitate potential flood insurance rate discounts citywide as a result of improving the City's Community Rating System standing; and in response to Comprehensive Plan Policies related to adaptation.** The proposed Referendum language has been carefully worded as to avoid unintended consequences.

The proposed language was crafted by a diverse group of Key West citizens that represented environmental and quality of life groups, historic preservationists, business owners and home owners. As a group, consensus was reached on the proposal because raising homes above flood levels **1) helps people protect themselves and what is important to them from flooding; 2) is nondiscriminatory, fair and equitable; 3) respects existing building height protections; 4) respects existing Historic District protections; and 5) is the most proactive approach for the future of the Key West community.**

1. **It helps people protect themselves and what is important to them from flooding.** In 2005, as a direct result of hurricanes Dennis, Katrina, Rita and Wilma some 3,000 of the City's permanent population never returned.

Further, personal belongings were destroyed, several weeks of business lost, approximately 70% of vehicles were ruined, and homes and businesses were flooded, causing \$17 million in public property damage, and at least \$164 million in insured personal property, not including losses that weren't covered by flood insurance.

2. **Nondiscriminatory - Fair and equitable**

- a. It provides flood relief to the most **existing structures**, particularly in the most low lying flood prone areas of the City with the lowest height limitations (25').
- b. Due to its flexibility, it does not single out or subject the most vulnerable property owners who voluntarily choose to elevate their structures to a height variance process which is costly.

3. **Provides height protection** - It limits the overall height of the existing or new structure in several ways as follows:

- a. Does **not change the height limitations** currently existing in the Comprehensive Plan and Land Development Regulations nor changes the point where height is measured from Citywide (crown of the road).
- b. Provides an **exception** to the height restriction that is tied to the elevation of the building to or above FEMA flood levels.

Buildings will not be granted an exception that are not elevating above the flood level. The buildings sitting on the highest ground will be the most restricted and the lowest lying structures will be provided the most flexibility to raise the structure.

- c. **Limits the exception to a maximum building height of 40 feet.**

\* This does not change the existing building height limitations.

\* Size of the building + feet elevated off the ground = 40' or less

- d. Allows a building to be raised **above the regulated flood level to a maximum of 4 feet**. The distance above the required minimum flood level is defined as "*freeboard*."

According to information obtained from the state representative of the National Flood Insurance Program, the cost of flood insurance goes down exponentially for every foot that a building is raised above the flood zone level with the maximum savings possible being achieved at three (3) feet about the flood level.

In anticipation of the flood map changes expected within the next few years flood levels are expected to increase one foot citywide, an additional foot of freeboard is planned to account for this loss. Further, 4' of freeboard is commensurate with sea level rise projections for the next 50 years.

#### 4. **Protects the Historic District**

- a. **Does not change or supersede existing Historic Architectural Guidelines.** Existing Historic Architectural Guidelines will continue to regulate properties and protect the character of the Historic District for new development with the following existing provisions (p.38). The Historic Architectural Guidelines presently state the following:

*Elevation of finished floor above grade - Applications for buildings with the first finished floor above the minimum height necessary to comply with federal flood regulations will not be approved unless the applicant demonstrates that such elevation does not interfere with the essential form and integrity of properties in the neighborhood. In situations wherein*

*parking is proposed below the first finished floor, HARC shall consider how visible the parking is from the public right-of-way; whether the parking area is enclosed or otherwise concealed by walls louvers, lattice, landscaping or other features; and whether fill and/or berms are used to minimize the gap between the first finished floor and the crown of the nearest road*

**Height** – *must not exceed 2.5 stories. There must be a sympathetic relationship of height between new buildings and existing adjacent structures of the neighborhood. New buildings must be compatible with historic floor elevations. The height of all new construction shall be based upon the height of existing structures within the vicinity.*

**Proportion, scale and mass** – *massing, scale and proportion should be similar to that of existing historical buildings in the historical zone. No new construction shall be enlarged so that its proportions are out of scale with its surroundings. No structure shall outsize the majority of structures in the streetscape or historic zone.*

**Compatibility-** *Design must be compatible with Key West architectural characteristics in the historical zones. All new construction must be in keeping with the historic character in terms of size, scale, design, materials, color and texture.*

- b. FEMA exempts historically contributing structures from having to meet structural elevation requirements.
- c. A significant portion of the Historic District is in the FEMA designated flood zone 'X' which is **above FEMA established flood levels** of type AE and V flood zones and are NOT subject to this height referendum.
- d. Allows historic properties in lower lying areas (outside of the X zone) to elevate their structures protect their historic building from flood damage subject to the guidelines above.

**5. Most proactive approach:**

- a. It allows property owners to begin to adapt their homes before we are hit by the next big flood event without having to address this ballot question during a period of disaster recovery.
- b. It provides an important piece of regulatory relief to the complicated issues related to adaptation of our community to rising sea levels.
- c. It helps improve the City's Community Rating System ranking with National Flood Insurance Program; therefore providing flood insurance rate reductions Citywide.

- d. It allows new development to be sustainably constructed with a view towards the future of the island in which we experience more frequent flooding and permanent water inundation.
- e. In anticipation of the FEMA- National Flood Insurance Program Map changes expected within the next few years, it allows 4' of freeboard which provides upwards of 94% of reductions in flood annual insurance premiums and is a height commensurate with sea level rise projections.

#### Previous Actions

During the April 1, 2014 City Commission meeting the body directed planning staff to pursue additional research and input for a potential flood damage prevention building height referendum for the November 2014 ballot (see Attachment A).

Since that time staff has consulted various Flood Insurance Companies to gather additional information; made site visits throughout the city; assessed existing information; updated available Flood Maps; created other demonstrative tools; discussed the unintended consequences of the referendum language; and refined the approach.

Staff also met with local stakeholders to present a full range of potential approaches to a flood damage protection height referendum with limitations related to existing Land Development Code including: Last Stand, the Keys Branch of the US Green Building Council, FIRM, the DEO, the Keys Wide Planners Forum, the Key West Board of Realtors, the Chamber of Commerce, the League of Women Voters, HARC, the Planning Board, the Sustainability Advisory Board and BVRAC. The purpose of these meetings was to share the existing information and gather input (see Attachment B).

On June 9, 2014 a Focus Group, consisting of volunteers representing the groups above and the Historic Florida Keys Foundation, the Nature Conservancy, and the Marine Sanctuary (NOAA), was convened to build consensus on a single approach and refine the referendum language. The following approach, which includes an agreed upon amendment was, supported by all members present:

*To protect buildings against flooding and reduce flood insurance costs citywide, should the City allow an exception to building height regulations to permit one foot of additional building height for each one foot added, to raise buildings, voluntarily no more than 4' above FEMA established flood levels, not to exceed 40 feet in height?*

This consensus is the basis of the recommended referendum language.

#### General Concerns

Based on discussions with diverse groups and individuals throughout the community the following concerns have been identified, and vetted by the Focus Group and State:

1. *The height referendum will negatively affect the character of the city creating a stilt community:*

The character of Key West is irrefutably changing, but not as a result of the height referendum. The City faces outside pressures that cannot be negated on a local level such as:

- a. Federal and State regulations requiring all new or substantially improved structures be elevated.
- b. The city is built on porous limestone rock and cannot be buffered against flooding (such as in Holland), and that in order to maintain life as we know it both public and private buildings, services and transportation networks must be elevated.
- c. Sea level rise: Currently the City experiences flooding on high tides without rain which is dramatically aggravated during significant rain events. As sea levels continue to rise at their current rate we can expect more frequent flooding events. Climate change will result in increased frequency and intensity of storms and may cause greater sea level rise.

2. *The height referendum will negatively affect the Historic District.*

The language proposed for the Referendum attempts to balance the impacts that will occur with the need to protect the historic buildings from rising and flood water damage and property owners from rising insurance rates. Properties that are listed as Historically Contributing, or are located within the X zone are exempt from meeting FEMA flood elevation requirements; however, Historically Contributing they ARE NOT exempt from flood insurance rate hikes expected to suffer major increases within four years-time. Presently, the Historic Guidelines include a policy that requires permit review, on a site-by-site basis, for properties that wish to elevate above the required FEMA Flood elevation as stated above.

3. *The height referendum will only benefit developers.*

Careful consideration of the need to protect and adapt the existing housing stock has been used to craft the proposed referendum language, including and input from current home owners. This referendum does not change the existing height restrictions and provides a maximum height of 40' for property owners that wish to elevate their low-lying structures above flood prone levels.

4. *People will not be able to afford to elevate their homes.*

Homeowners with mortgaged property are required to carry flood insurance. The cost of flood insurance is incurring historic increases and property owners may decide that elevating their structures out of a rising flood zone is safer and cost effective. Government regulations should not stand in the way of allowing people to protect their homes from flooding and lowering their flood insurance costs to acceptable levels.

Staff is currently seeking the assistance of the Florida Building Commission to provide non-biased data as to how much it costs to elevate an existing structure. Further, the City is pursuing multiple avenues for programs that assist homeowners in the cost of elevating their structures.

5. *Will the program be mandatory?*

No, the referendum language specifically states that the program is voluntary.

6. *A height Referendum won't solve the problems the City faces related to Climate Change.*

True, but it will help to provide relief related to some of the problems. Staff is working the wicked problem through a multifaceted approach most importantly beginning the long range process of coordinating the raising of our transportation networks and critical services throughout the Keys. Staff is also working on a Climate Change element to the Comprehensive Plan.

Legislative Considerations

The proposed referendum language requesting an exception to building height for flood protection purposes is compatible with the existing Historic Architectural Guidelines, and the existing Land Development Regulations because it does not change the height regulations nor does it change where height is measured from. It only allows staff to bring back to the City Commission for further review a Land Development Regulation change based on the proposed exception for height. Staff is proposing that Section 122-1149 read as follows:

Section. 122-1149. Height.

- (a) The term "building height" as used in the land development regulations shall mean the vertical distance from the crown of the nearest adjacent street to the highest point of the proposed building.
- (b) Height limitations contained in the schedule of district regulations located in divisions 2 through 14 of article IV of this chapter, in division 2 of this article and in this division shall apply to all construction unless otherwise stated herein below and/or in section 122-1151.
- (c) These height regulations may be waived subject to variance criteria found in Chapter 90-391 in order to accommodate non-habitable hardware and utility structures typically associated with the principal structure, including spires, belfries, cupolas, antennas, water tanks, ventilators, chimneys, or other appurtenances usually required to be placed above the roof level and not intended for human occupancy or use.
- (d) Flood Protection Building Height Exception: An exception to the building height regulations as referenced in subsection (b) above may be permitted in cases where a building is raised above the ground to meet or exceed FEMA established base flood elevation levels under the following conditions:
  - 1. Only the equivalent measurement of distance from the existing ground level, prior to infill, to the required base flood elevation of the building, and up to a maximum of four (4) feet above the base flood elevation, may exceed the building height regulations.
  - 2. No exception shall result in a building height that would exceed 40 feet.

The proposal is consistent with Comprehensive Plan *Policy 1.1.12.5: Increased Height: The City shall consider allowing increased heights for new construction or redevelopment if such additional height is justified based on adopted Coastal High Hazard Maps and Storm Surge Flood Maps in order to promote safe new development and redevelopment based on sea level rise predictions. Such additional height must be compatible with surrounding development.*

Process

City Commission discussion of potential referendum	April 1, 2014
Stakeholder Group Meetings	April – May, 2014
Focus Group Meeting	June 9, 2014
City Commission 1 <sup>st</sup> reading	July 1, 2014
City Commission 2 <sup>nd</sup> reading	August 5, 2014

Attachments:

*Attachment A* – April 1, 2014 **City Commission Discussion item Report** (w/out Exhibits)

*Attachment B* – **May 22, 2014 Stakeholder Groups Report**. This report contains Referendum Language Options 1-5 that evolved as a result of the stakeholder group meetings and discussions with community members and were presented to the Focus Group. This report also contains important Flood Insurance Terms and Savings analysis.

- a. Exhibit 1 - 2014 Referendum and LDR Amendments Timeline
- b. Exhibit 2 – BW 12 Update. 20140305 email from Scott Fraser
- c. Exhibit 3 – Massachusetts Coastal Zone Management Smart Cost information
- d. Exhibit 4 - FEMA NFIP rate maps (X-zone) and complete City BFE Map
- e. Exhibit 5 - District Map
- f. Exhibit 6 – 2011 Key West Stormwater Master Plan Topography Map
- g. Exhibit 7 – City of Key West Storm Surge Map, Engineering Services, 2012
- h. Exhibit 8 – Comprehensive Plan Coastal High Hazard and Storm Surge Map
- i. Exhibit 9 – FEMA Repetitive Loss and Severe Repetitive Loss Map
- j. Exhibit 10 – CRS points system and insurance rates description

Options/Advantages/Disadvantages:

**Option 1:** Approve the referendum language as proposed:  
*To protect property against flooding and reduce flood insurance costs for taxpayers citywide, should the City permit an exception to building height regulations when buildings are voluntarily raised off the ground, up to four feet above FEMA established flood levels, yet no more than 40' in height?*

**1. Consistency with the City's Strategic Plan, Vision, and Mission:**

The referendum approach is consistent with the intent of the Strategic Plan, Vision, and Mission to protect and respond to the Environment and the Climate Action Plan; to protect the Economy including our private assets and keep housing affordable; to create sustainable Infrastructure that supports local needs, the economy, and green

practices; to implement the adopted long range plans of the City, such as the Comprehensive Plan and the Climate Action Plan; and protect and improve the Quality of Life.

2. **Financial Impact:** The new regulations would result in higher FEMA Community Rating System standing, which will help to lower flood insurance rates citywide. Additionally, if the referendum is approved and property owners elevate their structures it will result in lower insurance rates for the property owners and help the City to maintain a healthy tax base.

**Option 2:** Deny the referendum language as proposed:

1. **Consistency with the City's Strategic Plan, Vision, and Mission:** Denying the proposed referendum language may be inconsistent with the intent of the Strategic Plan, Vision, and Mission
2. **Financial Impact:** If the referendum language is denied the City will lose the opportunity to allow the voters to decide whether to allow additional height to mitigate flooding. Preventing the voters from choosing will not help the City achieve higher FEMA Community Rating System standing, which would help to lower flood insurance rates citywide; and may contribute to situations where homeowners are forced to pay high flood insurance premiums because they cannot elevate their structures without exceeding the height restrictions in the lowest lying areas of the City.

### **Recommendation**

The Planning Department recommends **approval** of the proposed flood protection referendum language.



## THE CITY OF KEY WEST

Post Office Box 1409 Key West, FL 33041-1409 (305) 809-3700

**To:** City Commissioners  
**From:** Division of Community Development Services  
**Date:** March 11, 2014  
**Subject:** Building Height – Referendum and LDR Amendment Process

### Statement of Problem

The City of Key West is a low lying island with a maximum topographic elevation of 16' above sea level, leaving the city, its residents and assets vulnerable to flooding from high tides, storm surge and sea level rise. Furthermore, the island substrate is permeable limestone and cannot be buffered from water inundation. The City's adopted Climate Action Plan, consistent with regionally adopted standards, anticipates an increase in the number of intense storms in the region and predicts that sea levels will rise between 3" and 7" feet by 2030. According to NOAA tidal gauges, the tide has risen 9" since 1870, causing an increase in flooding throughout the city on a regular basis, limiting access to homes and businesses, and causing water damage during marginal rain storm events and/or high tides.

According to the FEMA NFIP rate maps nearly 2/3 to 3/4 of the City is currently located within the Special Flood Hazard Area and susceptible to the negative effects of sea level rise. In order for the city to adequately protect the city's tax base and private property from high insurance cost and water damage it is critical that the City's Land Development Regulations facilitate the ability for property owners to elevate their property above the flood plain.

Conversely, the current building height restrictions do not anticipate the city's need to adapt for sea level rise and are too low to effectively adapt the existing and future housing stock and commercial structures, built on small properties within a dense urban land fabric. Further, the height restrictions in the Land Development Regulations are restricted by the charter and subject to change only upon approval of a majority public vote at a general municipal election (Charter Section 1.05 (a)).

### Solution Statement

Staff recommends that the City Commission consider a referendum item for the November election to consider allowing additional height for buildings that elevate their structures in order to construct livable area above the flood plain. The maximum amount of height would be limited as follows:

**Draft Approach – Referendum Language (75 words or less)**

In city areas wherein the maximum building height is 35 feet or less, should the building height restrictions contained in the land development regulations be amended to allow one foot of additional building height for each one foot of elevation above the base flood elevation of up to 5 feet within the VE and AE flood zones on NFIP's rate map to protect against flood damage and lessen the cost of flood insurance citywide?

#### Why go through the process of amending LDR's related to building height?

1. *Roadblock to property protection* - Current building height restrictions create a roadblock for property owners attempting to protect their assets.
2. *Stable tax base* - Protecting property facilitates stability of property values and tax base.
3. *BW 12* - October 1, 2013 Brigit Waters 12 became effective eliminating the National Flood Insurance Policy subsidy program. Although negotiations have postponed the new flood insurance rates from taking effect they are inevitable. For nonconforming properties (majority of city), the rate increase will be significant. Drastic discounts provided for elevating structures out of the floodplain with steeper discounts for freeboard protection.
4. *CRS Rating* - Creating mandatory building height elevation automatically elevates our CRS rating, systematically lowering everyone's flood insurance rates.
5. *FEMA NFIP Rate Map Changes looming* – loss of 1 foot BFE likely citywide (possibly 2018).
6. *Climate Change Action Plan* - Adopted Sea Level Rise predicts 3-7" by 2030 and 9-24" by 2060. Meets Adaptation needs for City's Adopted Climate Change Action Plan.
7. *New BPAS units* - Minimum of 910 new residential BPAS units to be constructed by 2023 required to be built 1.5' above BFE.
8. *Timely* - LDR Amendment Overhaul Process beginning now.
9. *Best interest of Community* - Best interest of property owners and the community as a whole.

#### What happens if we don't do anything?

1. More and more private and public property will be subject to flooding and or insurance defaults due to height restrictions that prevent existing structures  
In light of regulations that new development and substantial improvement be built 1' above Base Flood Elevation, building reasonably sized  
Land Development Regulations will or existing structures from elevating to protect themselves from rising sea level, storm surge, high tides, heavy rain events and raising insurance rates. The city may be subject to lawsuit.
2. Many properties may go into foreclosure due to inability to pay high flood insurance costs.
3. Tax base may be negatively affected.
4. The City's CRS rating will remain stagnant and low, and citywide flood insurance rates will remain high.

#### Positive and Negative Considerations of Approach

##### **Positive**

1. Simple and easy to understand.
2. Protects the existing height and character of districts outside of the Special Flood Hazard Areas such as the majority of the Historic District.
3. All of residential neighborhoods would still maintain a maximum height of 35-40'. Below Tree height.

4. Responds to Federal and local request to improve the City's Community Rating System (CRS) by FEMA.
5. New policy would automatically improve City's CRS, lowering flood insurance rates throughout the city.
6. Shows leadership on a national level.
7. Provides flexibility for future FEMA Flood Map amendments.
8. Accommodates potential 3' sea level rise predictions.
9. In some cases it may provide space for property owners to park or have storage beneath the house.
10. Potential to invite development – raising property values.
11. Limits amount of legislative changes necessary (see below).

#### **Negative**

1. The character of the traditional, ground level neighborhoods, characteristic of the single family zoning district, will begin to change. Particularly in the lowest places on the island.
2. Perception of massing and scale.

#### **Other Elements Taken into Consideration**

These statements were all weighed and considered by staff in order to formulate the most responsible approach as proposed.

- Consider amending height restrictions by flood zone district instead of land use zoning district.
- Consider amending the definition of Building Height (where height is measured from) instead of using the reference point of the crown of the road.
- Limit the number of stories allowed.
- Provide flexibility for: future changes to flood insurance maps; future rate hikes; storm surge; sea level rise; and mitigates flood insurance risk for 910 new Building Permit Allocation System units.
- Provides minimum and maximum.
- Use design standards in future LDR amendments to mitigate changing character of neighborhoods.
- What about in the X – zone and Historic preservation concerns?
- Florida Building Code provides exceptions to Brigget Waters (BW 12) for contributing structures (Ch. 11).
- Will 5' of height facilitate ability for some structures to add parking and storage below house?
- November 4, 2014 – Timeline for ballot request (see attached).
- Referendum is no cost to the City.
- Will approach accommodate existing structures in the lowest lying areas (SF district)? Code currently allows 5' for a pitched roof.
- BW 12 reclassifies the threshold for redevelopment that triggers the elevation of a structure – 30% of value of the building constitutes “substantial improvement”; 50% of the value is considered “substantial damage.”

#### **Legislative Considerations:**

##### **Existing Supporting Legislation -**

**Comprehensive Plan Policy 1.1.12.5: Increased Height:** The City shall consider allowing increased heights for new construction or redevelopment if such additional height is justified based on adopted Coastal High Hazard Maps and Storm Surge Flood Maps in order to promote safe new development

and redevelopment based on sea level rise predictions. Such additional height must be compatible with surrounding development.

**This approach supports Limited Policy Amendments -**

- **Changes to the LDR's would be limited to new language in Chapter 122 including: the Supplemental District Regulations, and perhaps the addition of references to each zoning district Section for clarity.**
- **No existing LDR's referencing height would be removed.**
- **No changes to the Comprehensive Plan are necessary if definition of "Building Height" is not changed.**
- **Changes to the HARC Guidelines are not likely necessary**

**Focus Groups and Key Partners**

Board of Realtors, Sustainability Advisory Board, Last Stand, USGBC, GLEE, HARC, Insurance Companies, League of Women Voters, Architect organizations, Planners Forum, County and State, Developers and Public Participants, Historic Preservation groups, Chamber of Commerce and the Business Guild.

**Attachments:**

1. Exhibit 1 - 2014 Referendum and LDR Amendments Timeline
2. Exhibit 2 – BW 12 Update. 20140305 email from Scott Fraser
3. Exhibit 3 – Massachusetts Coastal Zone Management Smart Cost information
4. Exhibit 4 - FEMA NFIP rate maps (pending)
5. Exhibit 4 - District Map
6. Exhibit 5 – 2011 Key West Stormwater Master Plan Topography Map
7. Exhibit 6 – FEMA Repetitive Loss and Severe Repetitive Loss Map
8. Exhibit 7 – FEMA Repetitive Loss and Severe Repetitive Loss Map Enhancements
9. Exhibit 8 – City of Key West Storm Surge Map, Engineering Services, 2012
10. Exhibit 9 – Adopted Comprehensive Plan Coastal High Hazard and Storm Surge Map



## THE CITY OF KEY WEST

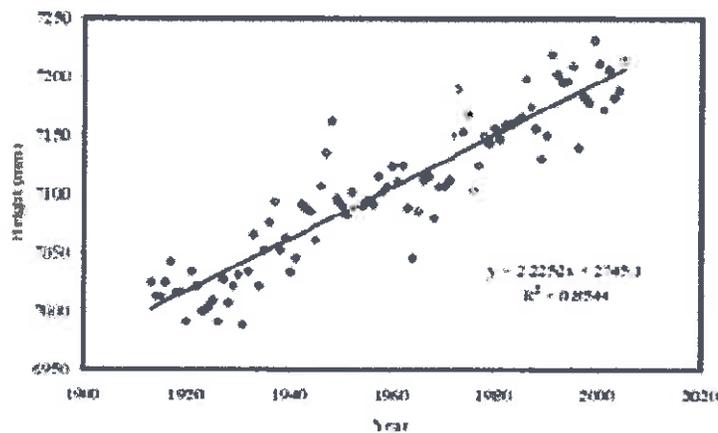
Post Office Box 1409 Key West, FL 33041-1409 (305) 809-3700

**To:** Stakeholder Groups  
**From:** Division of Community Development Services  
**Date:** May 22, 2014  
**Subject:** Building Height – Referendum and LDR Amendment Process

### Statement of Problem

The City of Key West is a low lying island with a maximum topographic elevation of 16' above sea level, leaving the city, its residents and assets vulnerable to flooding from high tides, storm surge and sea level rise. Furthermore, the island substrate is permeable limestone and cannot be buffered from water inundation. The City's adopted Climate Action Plan, consistent with regionally adopted standards, anticipates an increase in the number of intense storms in the region and predicts that sea levels will rise between 3" and 7" by 2030. According to NOAA tidal gauges, the tide has risen 9" since 1846 (Table 1), causing an increase in flooding throughout the city on a regular basis, limiting access to homes and businesses, and causing water damage during marginal rain storm events and/or high tides.

Table 1  
Annual Mean Key West Sea Level



According to the FEMA NFIP rate maps nearly 80% of the City is currently located within the Special Flood Hazard Area and susceptible to the negative effects of sea level rise. In order for the city to adequately protect the city's tax base and private property from high insurance cost and water damage it is critical that the City's Land Development Regulations facilitate property owners ability to elevate their property above the flood levels.

Conversely, the current building height restrictions do not anticipate the city's need to adapt for sea level rise and are too low to effectively adapt the existing and future housing

stock and commercial structures, built on small properties within a dense urban land fabric. Further, the height restrictions in the Land Development Regulations are restricted by the charter and subject to change only upon approval of a majority public vote at a general municipal election (Charter Section 1.05 (a)).

### **Solution Statement**

With the help of input from stakeholder groups that represent Historic Preservationists; Environmentalists and Quality of Life groups; and Property owners Architects, Builders and Developers, staff recommends that the City Commission consider placing a referendum on the November election ballot to consider allowing additional height for buildings that elevate their structures in order to construct livable area above flood levels, but that the maximum amount of height continue to be limited. At this time staff has discussed five distinct approaches to the referendum for discussion and consideration, including do nothing, based on the following facts, and issues and their possible solutions.

### **Why go through the process of amending LDR's related to building height?**

1. *Roadblock to property protection* - Current building height restrictions create a roadblock for property owners attempting to protect their assets.
2. *Stable tax base* - Protecting property facilitates stability of property values.
3. *BW 12* - October 1, 2013 Biggert-Waters Flood Insurance Reform Act of 2012 became effective eliminating the National Flood Insurance Policy subsidy program. Although emergency corrective legislation has postponed the new flood insurance rates from taking effect. they are inevitable. For nonconforming properties located below required flood levels, which constitute a majority of the City, the rate increase will be significant. Cumulatively, and highly likely in the near future, large substantial insurance rate discounts are provided for elevating structures out of the floodplain; with steeper discounts for freeboard (additional height above freeboard) protection (see definition below and Exhibit 2 for examples).
4. *CRS Rating* - Creating a system that facilitates building flood elevation requirements would increase our CRS rating, systematically lowering everyone's flood insurance rates (see Exhibit 10 for additional information).
5. *FEMA NFIP Rate Map Changes looming* - In the next few years FEMA will begin the process of amending the local Flood Maps that dictate flood insurance rates. Likely the Map changes will result in a loss of 1 foot BFE citywide. This means structures that were previously elevated +1' above BFE will be back at BFE and lose the insurance rate discount for the +1' freeboard previously obtained. Therefore, it would be advantageous to elevate structures +1' higher in order to meet looming FEMA map changes and future requirements.
6. *Climate Change Action Plan* - Adopted science for Sea Level Rise anticipates 3-7" of rise by 2030 and 9-24" by 2060. Providing relief for buildings from sea level rise is consistent with the adopted plan.
7. *New BPAS units* - Maximum of 910 new residential BPAS units to be constructed by 2023 required to be built 1.5' above BFE. Mitigating flood hazard for all new residential construction is good planning.
8. *Timely* - LDR Amendment Overhaul Process beginning now.
9. *Best interest of Community* - A height allowance that is directly related to flood mitigation supports property owners by modifying regulations that prohibit them from protecting their property.

10. *Consistent with existing Comprehensive Plan Policy:*

Comprehensive Plan Policy 1.1.12.5: Increased Height: The City shall consider allowing increased heights for new construction or redevelopment if such additional height is justified based on adopted Coastal High Hazard Maps and Storm Surge Flood Maps in order to promote safe new development and redevelopment based on sea level rise predictions. Such additional height must be compatible with surrounding development.

11. *Proactive approach* – Facilitates mitigation before the next disaster. Referendum is a lengthy process that should not be in reaction to a disaster, but rather facilitates adaptation before or in response to damage caused by the next big event.

**Elements Taken into Consideration of Approaches**

The following considerations for possible referendum approaches were discussed amongst staff and at stakeholder group meetings where meaningful public input was gathered.

- Amend height restrictions by changing the point where height is measured from instead of using the reference point of the crown of the road? Possibly use:
  - Base flood elevation as depicted in the NFIP Maps; or
  - Elevation of existing property based on individual flood elevation certificates.
- Future changes to flood insurance maps; future rate hikes; storm surge; sea level rise; and mitigation for flood insurance risk for 910 new Building Permit Allocation System units.
- Limit the number of stories allowed?
- Savings in flood insurance rates for elevating a structure above Base Flood Elevation (BFE).
- Changing character of the structural design pattern of the City, from ground floor entries to more structures on stilts, is not voluntary nor is it controlled by the City, the elevation of structures is *REQUIRED* by FEMA a Federal Agency.
- Require building elevation to build to an established freeboard level or continue with a voluntary program?
- Balance protection of the built environment (people's homes, businesses and public infrastructure) with protection of the City's character by:
  - Creating design standards in upcoming LDR amendments to mitigate changing character of neighborhoods as we build up.
  - Coordinate with HARC to balance protection of the historic structures with protection of the character of the historic district.
  - Consider creating a minimum an/or maximum cap on height allowance both at the freeboard level and the height of the structure.
- Consider Florida Building Code exception for historic contributing structures (FBC Ch. 11). The Building Code exception does not provide relief from the rising flood insurance rates.
- Consider whether the amendments should allow for protection of most of the existing structures or just some:
  - How much height is needed to protect almost all of the existing residential housing stock on the island? (Worst case scenario) Will the approach accommodate existing structures in the lowest lying areas (SF district)?
  - Is it more important to protect the character of the island at street level or moderately above, or to take a long-range approach to sea level rise and allow more significant height changes?
- November 4, 2014 – Timeline for ballot request (see Exhibit 1 attached schedule).

- The holding of a referendum is at no cost to the City.

### **Specific Concerns Related to the Historic District**

During stakeholder group meetings, concern about the negative impact to the Historic District have arisen. Planning Staff, including the Historic Preservation Planner are sensitive to the impacts that will occur there, but have to balance the need to protect the historic buildings from rising and flood water damage and rising insurance rates. Properties that are listed as Historically Contributing, or are located within the X zone are exempt from meeting FEMA flood elevation requirements; however, Historically Contributing they ARE NOT exempt from flood insurance rate hikes. At this time the Historic Guidelines have a policy that requires permit review, on a site-by-site basis, for properties that wish to elevate above the required FEMA Flood elevation. It is anticipated that the Historic Guidelines will be amended to provide both flexibility and protection of the character of the Historic District, weather the referendum is approved or not.

### **Flood Insurance Terms and Savings**

**Base Flood Elevation (BFE)** – The height to which the lowest living floor of a building within a special flood hazard area is required to be elevated to as it relates to sea level as depicted on the FEMA National Flood Insurance Rate Maps (FIRM).

**Floodproofing** – Means elevating a structure out of the flood level (required for residential structures) or providing a type of design that allows water to flow beneath or through a building such as breakaway walls or flood vents (allowed for commercial uses).

**Flood Insurance Rate Map (FIRM)** - The official map of the community, on which FEMA has delineated both special flood hazard areas and the risk premium zones applicable to the community [Also defined in FBC, B, Section 1612.2.].

**Freeboard** – the area between the Base Flood Elevation (BFE) and the joist of the first floor of the structure. The Florida Building Code requires new and substantially renovated residential structures to elevate one foot (1') of freeboard above Base Flood Elevation. The cost of flood insurance for residential and commercial properties decreases for every foot of freeboard for up to 3'.

- Residential Properties Cost Benefit: Estimated local insurance cost savings for residential structures is maximized at an elevation of three (3') of freeboard above Base Flood Elevation:
  - +1' Freeboard = approximately 87% annual savings
  - +2' Freeboard = approximately 90% annual savings
  - +3' Freeboard = approximately 94% annual savings
- Commercial Properties Cost Benefit: For commercial properties there is a similar insurance cost savings for elevating or floodproofing a structure, when the minimum floodproofing height is exceeded. As with the freeboard discount for residential properties, the floodproofing freeboard credit is maximized at +3' above BFE.

**\*\*Please note that during the next few years FEMA will be revising the local flood maps and likely each flood zone will be increased by 1'. This means that structures that elevate 3' of freeboard today, will only have 2' of freeboard in the near future and their insurance rates will**

**rise accordingly. It is for this reason that 4' of freeboard is suggested as an alternative for maximum base floor elevation allowance in all referendum language.**

**Special flood hazard area** - An area in the floodplain subject to a one-percent or greater chance of flooding in any given year. Special flood hazard areas are shown on FIRMs as Zone A, AO,A1-A30, AE, A99, AH, V1-V30, VE or V [Also defined in FBC, B Section 1612.2.].

**Referendum Language Draft Approaches** – At the April 1, 2014 City Commission Meeting staff prepared a report for discussion of a potential height referendum. The report provided the Commission one (1) Referendum Language option with a list of topics that staff had considered when drafting the report. The Commission supported the idea of the potential height referendum with the understanding that stakeholder and City Attorney input were still required. It is the responsibility of the Focus Group to now help staff create an approach that is clear and understandable and is tolerable, meaning the approach will have the strength to stand on its

**Referendum Language (75 words or less):** Staff has provided the following options for consideration of referendum language:

In order to provide the City with the most reasonable approach to changing height possible.

**Option 1.** To protect homes and businesses against flood damage and lessen the cost of flood insurance citywide, should the building height restrictions contained in the land development regulations be amended, in areas wherein the maximum building height is 35 feet or less, to allow one foot of additional building height for each one foot of elevation necessary to achieve the base flood elevation or above for up to 5 feet within the regulated flood zones on NFIP's rate map?

Positive and Negative Considerations of Option 1.

Positive

1. Protects the existing height and character of districts outside of the Special Flood Hazard Areas such as the majority of the Historic District.
2. All of residential neighborhoods would still maintain a maximum height of 35-40'. Below Tree height.
3. Responds to Federal and local request to begin to improve the City's Community Rating System (CRS) by FEMA.
4. Shows leadership on a national level.
5. Provides flexibility for upcoming FEMA Flood Map amendments (2018ish).
6. Accommodates potential 3' sea level rise predictions.
7. In some cases it may provide space for property owners to park or have storage beneath the house.
8. Potential to invite development – raising property values.
9. Limits amount of legislative changes necessary (see below).

Negative

1. The character of the traditional, ground level neighborhoods, characteristic of the single family zoning district, will begin to change. Particularly in the lowest places on the island.
2. Perception of massing and scale.

**Option 2.** To protect homes and businesses against flood damage and lessen the cost of flood insurance citywide, should the building height restrictions contained in the land development regulations be amended, in areas wherein the maximum building height is 35 feet or less, to allow one foot of additional building height for each one foot of elevation necessary to elevate buildings to the minimum flood elevation and up to 3-4' of freeboard within the regulated flood zones?

Positive and Negative Considerations of Option 2.

**Positive**

1. Provides protection of the height restrictions while ensuring that **most** existing buildings (particularly residential) can be elevated to meet FEMA and Florida Building Code requirements (BFE +1).
2. Provides flexibility for voluntary elevation of the structure of up to 3-4' of freeboard in order to prepare for sea level rise and changing NFIP Maps.
3. Allows property owners to maximize flood insurance savings for 3' of freeboard.
4. Protects the existing height within reason
5. Responds to Federal and local request to move towards improvements to the City's Community Rating System (CRS) by FEMA.
6. Shows leadership on a national level.
7. Provides flexibility for future FEMA Flood Map amendments.
8. Accommodates potential 3' sea level rise predictions.
9. Potential to invite development – raising property values.
10. Limited amount of legislative changes necessary (see below).

**Negative**

1. The character of the traditional, ground level neighborhoods, characteristic of the single family zoning district, will begin to change. Particularly in the lowest places on the island.
2. Perception of massing and scale.
3. This approach would not guarantee a max height of 35-40'.

**Option 3.** To protect homes and businesses against flood damage and lessen the cost of flood insurance citywide, should the definition of building height contained in the land development regulations be amended to require height be measured from the **NFIP Rate Map Base Flood Elevation**, instead of the crown of the road, to protect buildings against flood damage and lessen the cost of flood insurance citywide?

Positive and Negative Considerations of Option 3.

**Positive**

1. Based on the Federal elevation requirements for flood prevention

2. Responds to Federal and local request to improve the City's Community Rating System (CRS) by FEMA.
3. Shows leadership on a national level.
4. Provides flexibility for future FEMA Flood Map amendments.
5. Accommodates potential 3' sea level rise predictions.
6. In some cases it may provide space for property owners to park or have storage beneath the house.
7. Potential to invite development – raising property values.

Negative

1. The character of the traditional, ground level neighborhoods, characteristic of the single family zoning district, will begin to change. Particularly in the lowest places on the island.
2. This option allows the greatest height changes
3. This approach changes where height is measured from therefore changing the baseline that has already been used to create the city's massing and scale.
4. More legislative changes necessary (see below).

- Option 4.** To protect against flood damage and lessen the cost of flood insurance citywide, should the definition of building height contained in the land development regulations be amended to require height to be measured from the existing grade of the property as measured by a property specific Elevation Certificate instead of the crown of the road?

Positive and Negative Considerations of Option 4.

Positive

1. Based on the actual elevation of a property
2. May respond to Federal and local request to improve the City's Community Rating System (CRS) by FEMA.

Negative

1. Difficult to understand.
2. The character of the traditional, ground level neighborhoods, characteristic of the single family zoning district, will begin to change. Particularly in the lowest places on the island.
3. Perception of massing and scale
4. Does not provide flexibility for future FEMA Flood Map amendments.
5. This approach changes where height is measured from therefore changing the baseline that has already been used to create the city's massing and scale.
6. This approach will help the least amount of properties.
7. More legislative changes necessary (see below).

- Option 5.** Do nothing

Positive and Negative Considerations of Option 5.

Positive

1. Protects the existing height of the city
2. No additional work for staff

#### Negative

1. Does not respond to Federal and local request to improve the City's Community Rating System (CRS) by FEMA.
2. Does not provide a mechanism to alleviate the FEMA elevation requirements.
3. Limits ability to adapt to future FEMA Flood Map amendments.
4. Will result in additional height variances.
5. May result in more costly demolition of existing structures instead of the retrofit or elevation of existing structures.
6. May result in takings
7. More and more private and public property will be subject to flooding and or insurance defaults due to height restrictions that prevent existing structures
8. Land Development Regulations will continue to prevent new or existing structures from elevating to protect themselves from rising sea level, storm surge, high tides, heavy rain events and raising insurance rates. The city may be subject to lawsuit.
9. Many properties may go into foreclosure due to inability to pay high flood insurance costs.
10. Tax base may be negatively affected.
11. The City's CRS rating will remain stagnant and low, and citywide flood insurance rates will remain high.

#### Legislative Considerations:

Options 1-4 are supported by Comprehensive Plan Policy 1.1.12.5 for Increased Height as described above; although, other legislative changes would be required dependent on the approach as follows:

**Option #1 and #2** supports limited policy amendments to the Land Development Regulations and HARC Guidelines as follows:

- **Changes to the LDR's would be limited to new language in Chapter 122** including: the Supplemental District Regulations, and perhaps the addition of references to each zoning district Section for clarity.
- **HARC Guidelines Amendments:**
  - New Construction (p. 38, #2) – Revise policy related to elevation of building above FEMA requirements.

**Options #3 and #4** require changes to the Comprehensive Plan, Land Development Regulations and HARC Guidelines as follows:

- **Amend Comprehensive Plan Policy 1-1.1.3: Intensity Defined:**  
**Policy 1-1.1.3: Intensity Defined.** ...The term "building height" as used in the Land Development Regulations shall mean the vertical distance from the crown of the nearest adjacent street to the highest point of the proposed building....
- **Amend the Land Development Regulations for:**
  - Chapter 86-9 - definition of "Building Height".

- Section 122-1149. Height.
- **HARC Guidelines Amendments:**
  - New Construction (p. 38, #2) – Revise policy related to elevation of building above FEMA requirements.

**Option #5** does not require any legislative changes

### **Focus Groups and Key Partners**

FIRM, Board of Realtors, Sustainability Advisory Board, Last Stand, USGBC, GLEE, HARC, Insurance Companies, Architect organizations, Planners Forum, County and State, Developers and Public Participants, Historic Preservation groups, and the Chamber of Commerce.

### **Attachments:**

1. Exhibit 1 - 2014 Referendum and LDR Amendments Timeline
2. Exhibit 2 – BW 12 Update. 20140305 email from Scott Fraser
3. Exhibit 3 – Massachusetts Coastal Zone Management Smart Cost information
4. Exhibit 4 - FEMA NFIP rate maps (X-zone) and complete City BFE Map
5. Exhibit 5 - District Map
6. Exhibit 6 – 2011 Key West Stormwater Master Plan Topography Map
7. Exhibit 7 – City of Key West Storm Surge Map, Engineering Services, 2012
8. Exhibit 8 – Adopted Comprehensive Plan Coastal High Hazard and Storm Surge Map
9. Exhibit 9 – FEMA Repetitive Loss and Severe Repetitive Loss Map
10. Exhibit 10 – CRS points system and insurance rates description

# **Exhibit 1**



## 2014 Height Referendum and LDR Amendments Timeline

January 13, 2014	Timeline Development
January 15 and 17, 2014	Staff Meetings - Approach
February	Draft Referendum language
March	Meet with City Commissioners
April 1, 2014	City Commission Meeting - Discussion item
April - June, 2014	Focus Group Outreach and Meetings
April 10, 2014	Sustainability Board discussion
April 14, 2014	Last Stand discussion
April 29, 2014	League of Woman Voters discussion
May 7, 2014	HARC discussion
May 7, 2014	FIRM discussion
May, 2014	Chamber of Commerce
May 15, 2014	Planning Board discussion
June 12, 2014	Sustainability Board discussion
June, 2014	Key West Board of Realtors discussion
June 10, 2014	City Attorney Legistar agenda deadline
June 17, 2014	City Clerk Advertising deadline
July 1, 2014	City Commission Consideration of Referendum language - 1 <sup>st</sup> reading
August 5, 2014	If necessary: City Commission Consideration of Referendum language - 2 <sup>nd</sup> reading
August 19, 2014	Last day to submit Referendum information to MC Supervisor of Elections
August - November, 2014	Education Campaign - City and Partners
November 4, 2014	Election Day
November 20, 2014	LDR Amendment - Planning Board consideration
January 6, 2015	LDR Amendment - City Commission consideration, 1 <sup>st</sup> reading
January 20, 2015	LDR Amendment - City Commission Meeting, 2 <sup>nd</sup> reading. Begin 30 day local appeal period.
February 20, 2015	Transmit LDR Amendment to the State. 60 day a
May 10, 2015	LDR amendment becomes final. NOI posted and appeal period ends.

## **Exhibit 2**

## Nicole Malo

---

**From:** Scott Fraser  
**Sent:** Wednesday, March 05, 2014 2:56 PM  
**To:** Ron Wampler; Shawn Smith; Larry Erskine; Planning Department  
**Subject:** BW-Fix: House Bill 3370 Passed Last Night

As I feared, the bill passed last night by the US House doesn't seem to forestall massive rate increases for Pre-FIRM properties now being required to produce Elevation Certificates for the first time.

In the past, Pre-FIRM properties - those built prior to the flood maps (before 1975) - were all presumed below flood to some undetermined depth, and all rated essentially the same. BW-12 changed that universal Pre-FIRM rating.

For the first time, Pre-FIRM policy renewals require Elevation Certificates. Each building is then specifically rated relative to its depth below the flood level for that area.

The greatest impact has been to Pre-FIRM properties that are two or more feet below flood. These Submit-For-Rate policies can't be quoted by local insurance agents, and must be quoted by FEMA.

Homes one foot or so below flood will likely experience moderate increases. One property I'm aware of, where the building is about seven inches below flood is increasing from about \$6k annually to \$9k, gradually during the next few years.

Homes four or six feet below flood, are likely to still suffer massive increases.

However, there's a lot of seemingly double-speak in the bill's convoluted language. We likely won't know how this will all flush-out until FEMA interprets this bill and begins to apply it to actual premiums.

Here's bullet-list of changes from last night House vote (still has to return to the Senate for concurrence):

- Eliminates trigger to full actuarial rates on point of sale; allows assumption of existing flood insurance policies by new property owners. *[This should be a great relief to the local real estate, title and banking industries, that experienced an immediate loss of business beginning last Oct. 1st.]*
- 
- Creates longer glide path for eventually eliminating the Pre-FIRM subsidy on all properties. Provides for increases of at least 5 percent annually of the current premium (but also subject to the total premium increase cap of either 15 or 25 percent).
- 
- Provides for an optional higher deductible (\$10,000) for residential properties.
- 
- Eliminates Section 207 related to grandfathered rates when maps change. *[Key West won't likely be remapped until 2017-18.]*
- 
- Requires a surcharge on all flood insurance policies to pay for the longer glide path. \$250 per policy for second homes and businesses, and \$25 per policy for all other structures.
- 
- Mostly provides relief for certain residences, not policies for commercial properties, second homes nor those considered Repetitive Loss Properties (approximately 230 in Key West).

**Bottom Line:**

Owners of Pre-FIRM homes, two or more feet below flood, will need to seriously consider elevating their residences to ensure affordability of flood insurance...

or...

Contemplate methods of paying off their federally backed mortgages to escape the flood insurance coverage requirement.

***Scott***

Scott Fraser, CFM  
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FEMA Coordinator/Floodplain Administrator  
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QR Code: <https://docs.google.com/open?id=0B8Kl1ChmMu5nR1FMQVp1ZlI3Y00>

# **Exhibit 3**



# Raise Your Home, Lower Your Monthly Payments

## Protect buildings and reduce monthly expenses with freeboard

Without Freeboard



Annual flood insurance: **\$5,499**

With 3' of Freeboard



Annual flood insurance: **\$2,084**

*Elevating a home a few feet above legally mandated heights has very little effect on its overall look, yet it can lead to substantial reductions in flood insurance, substantially decrease the chances the home will be damaged by storms and flooding, and help protect against sea level rise.*

### What Is Freeboard?

Freeboard is elevating a building's lowest floor above predicted flood elevations by a small additional height (generally 1-3 feet above National Flood Insurance Program [NFIP] minimum height requirements). Elevating a home a few feet above legally mandated heights has very little effect on its overall look, yet it can lead to substantial reductions in flood insurance, significantly decrease the chances the home will be damaged by storms and flooding, and help protect against sea level rise.

### What Are the Benefits of Freeboard?

**Increased protection from floods and storms.** Storm waters can and do rise higher than shown on Flood Insurance Rate Maps (FIRMs). Freeboard helps protect buildings from storms larger than those that FIRMs are based on, and provides an added

margin of safety to address the flood modeling and mapping uncertainties associated with FIRMs.

**Better preparation for ongoing sea level rise.** Massachusetts has experienced a relative sea level rise of approximately 1 foot over the past 100 years. Since elevations on FIRMs do not include sea level rise, freeboard will help keep structures above floodwaters as storm surge elevations increase.

**Greatly reduced flood insurance premiums.** Recognizing that freeboard reduces flood risk, the Federal Emergency Management Agency (FEMA, which administers the NFIP) provides substantial (sometimes more than 50 percent) reductions in flood insurance premiums for structures incorporating freeboard. These savings can rapidly accumulate, especially over the life of a normal mortgage.

### Example of savings on NFIP premiums<sup>1</sup> with freeboard

	Annual savings in NFIP premiums	Savings over 30-year mortgage		Annual savings in NFIP premiums	Savings over 30-year mortgage	
<b>V Zone<sup>2</sup></b>	1' freeboard	\$1,360 (25%)	\$40,800	<b>A Zone<sup>3</sup></b>	\$502 (41%)	\$15,060
	2' freeboard	\$2,730 (50%)	\$81,900		\$678 (55%)	\$20,340
	3' freeboard	\$3,415 (62%)	\$102,450		\$743 (60%)	\$22,290

<sup>1</sup> **NFIP premiums** based on May 2007 rates for a one-floor residential structure with no basement built after a FIRM was issued for the community (post-FIRM rates differ from pre-FIRM rates). \$500 deductible/\$250,000 coverage for the building/\$100,000 for contents.

<sup>2</sup> **V zones:** This Flood Insurance Rate Map (FIRM) designation refers to coastal areas that are subject to the highest levels of wave energy and flooding.

<sup>3</sup> **A zones:** Also a FIRM designation, coastal A zones are subject to flooding but with less wave energy than V zones (i.e., wave heights less than 3 feet).

## What Are the Costs of Freeboard?

The expense of incorporating freeboard into new structures is surprisingly low, generally adding only about 0.25 to 1.5 percent to the total construction costs for each foot of added height, according to a 2006 FEMA-commissioned study (*Evaluation of the National Flood Insurance Program's Building Standards*). The minor resulting increase in monthly mortgage payments is generally more than offset by savings on NFIP premiums. Consequently, adding freeboard typically saves homeowners money.

Consider, for example, a proposed one-story building in the V zone<sup>2</sup> that will cost \$250,000 to build at minimum legal standards (the NFIP requires that all homes in the floodplain be elevated to at least the base flood elevation [BFE], mapped on FIRMs). According to the study cited above, adding each foot of freeboard to a home on piles or piers adds about 0.4 percent to total construction costs (about \$1,000 a foot in this example). If the owner takes out a mortgage at 6.5 percent APR for the total construction costs, he or she will have lower monthly payments (mortgage plus NFIP premiums) with 3 feet of freeboard, even though the construction costs are higher.

### Home at minimum legal height

Monthly mortgage payments	\$1,580.17
Monthly flood insurance	+ \$458.25
<b>Total monthly cost</b>	<b>= \$2,038.42</b>

### Home with 3' of freeboard

Monthly mortgage payments	\$1,599.13	(+\$18.96)
Monthly flood insurance	+ \$173.67	(-\$284.58)
<b>Total monthly cost</b>	<b>= \$1,772.80</b>	<b>(-\$265.62)</b>

In this example, adding 3 feet of freeboard saves the homeowner \$265.62 per month, or \$95,623.67 over a 30-year mortgage. Benefits in A zones<sup>3</sup> are generally less dramatic, but still substantial. To determine NFIP premiums for a specific property, see a licensed insurance agent.

## Who Can Benefit from Freeboard?

Nearly everyone building in floodplains can better protect themselves and their property and save on flood insurance by including freeboard into their construction and reconstruction projects. Additional benefits include:

- **Homeowners** - Whether or not you live in the house year-round, having it elevated increases the chances that

it will weather storms safely, decreasing your worry and protecting your investment. If you're building a new home, or doing a renovation, ask your builder/designer about incorporating freeboard.

- **Builders/contractors** - Freeboard provides a competitive edge over other builders, allowing you to market the benefits of reduced flood insurance and flood risk to potential buyers. When doing retrofits (especially those requiring bringing structures up to current NFIP standards), explain the benefits of freeboard to your clients.
- **Municipalities** - Encourage the use of freeboard in appropriate private and public construction throughout your community's floodplain. (NOTE: The Massachusetts Attorney General's office has recently rejected bylaws requiring freeboard, but municipalities may promote its use.)
- **Businesses** - Freeboard helps: protect your buildings, important records, and inventory from flooding; drastically decrease your recovery/clean-up time after storm; and potentially save your business. The Institute for Business and Home Safety reports that more than 25 percent of businesses that close due to storm damage never reopen.

## For More Information . . .

- For technical details on costs of using different flood-resistant building techniques (including freeboard), see the American Institutes for Research's *Evaluation of the National Flood Insurance Program's Building Standards* 2006 study at [www.fema.gov/library/viewRecord.do?id=2592](http://www.fema.gov/library/viewRecord.do?id=2592).
- For general information on the National Flood Insurance Program, see [www.FloodSmart.gov](http://www.FloodSmart.gov).
- For specific questions on flood insurance rates, see a licensed insurance agent.
- Communities looking for more information on the National Flood Insurance Program can contact Richard Zingarelli, Massachusetts NFIP Coordinator: (617) 626-1406, [Richard.Zingarelli@state.ma.us](mailto:Richard.Zingarelli@state.ma.us).
- For general information on how Massachusetts communities can protect themselves from storms, see the StormSmart Coasts website at [mass.gov/czm/stormsmart](http://mass.gov/czm/stormsmart).
- Businesses looking to prepare for storms and other catastrophic events should visit the Institute for Business and Home Safety's website at [www.ibhs.org](http://www.ibhs.org).



Executive Office of Energy and Environmental Affairs  
Ian A. Bowles, Secretary



Commonwealth of Massachusetts  
Deval L. Patrick, Governor  
Timothy P. Murray, Lieutenant Governor



Massachusetts Office of Coastal Zone Management  
Deerin Babb-Brott, Director  
Bruce K. Carlisle, Assistant Director

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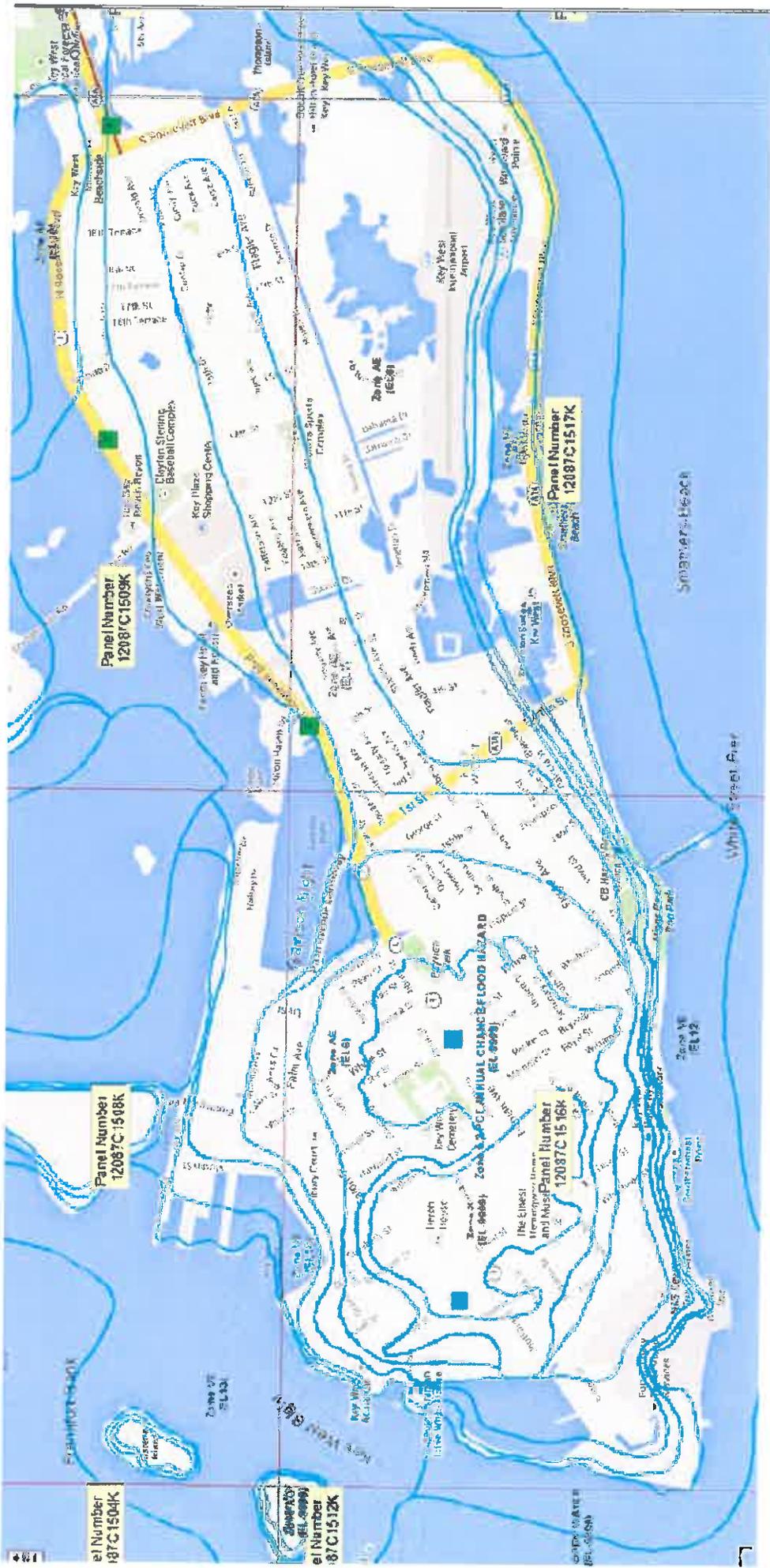
This fact sheet was developed through CZM's StormSmart Coasts program, which supports community efforts to manage coastal floodplains. For further information on StormSmart Coasts, visit [www.mass.gov/czm/stormsmart](http://www.mass.gov/czm/stormsmart).

**Author:** Wes Shaw, National Oceanic and Atmospheric Administration (NOAA) Coastal Management Fellow **Designer:** Arden Miller, CZM **Editor:** Anne Donovan, CZM

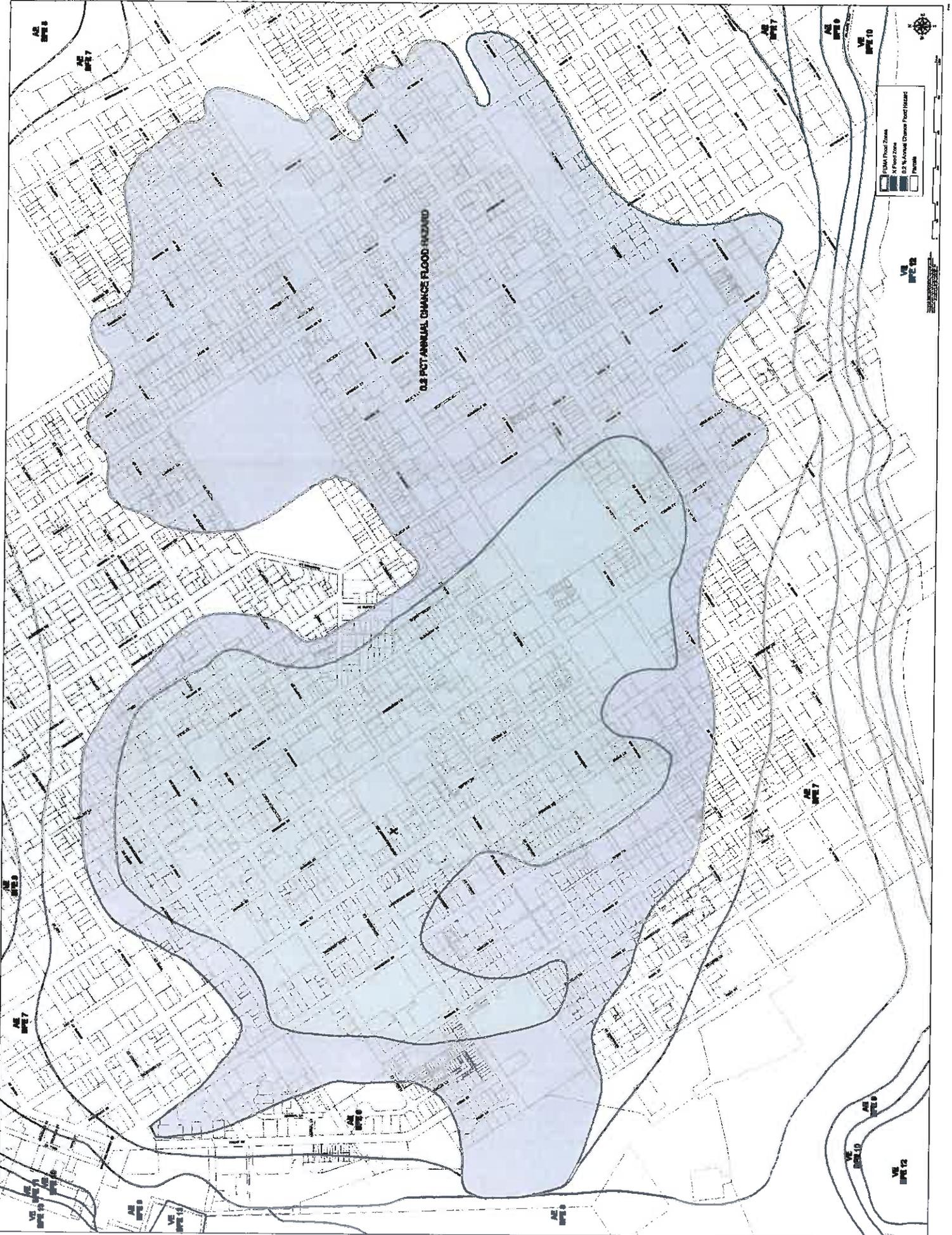
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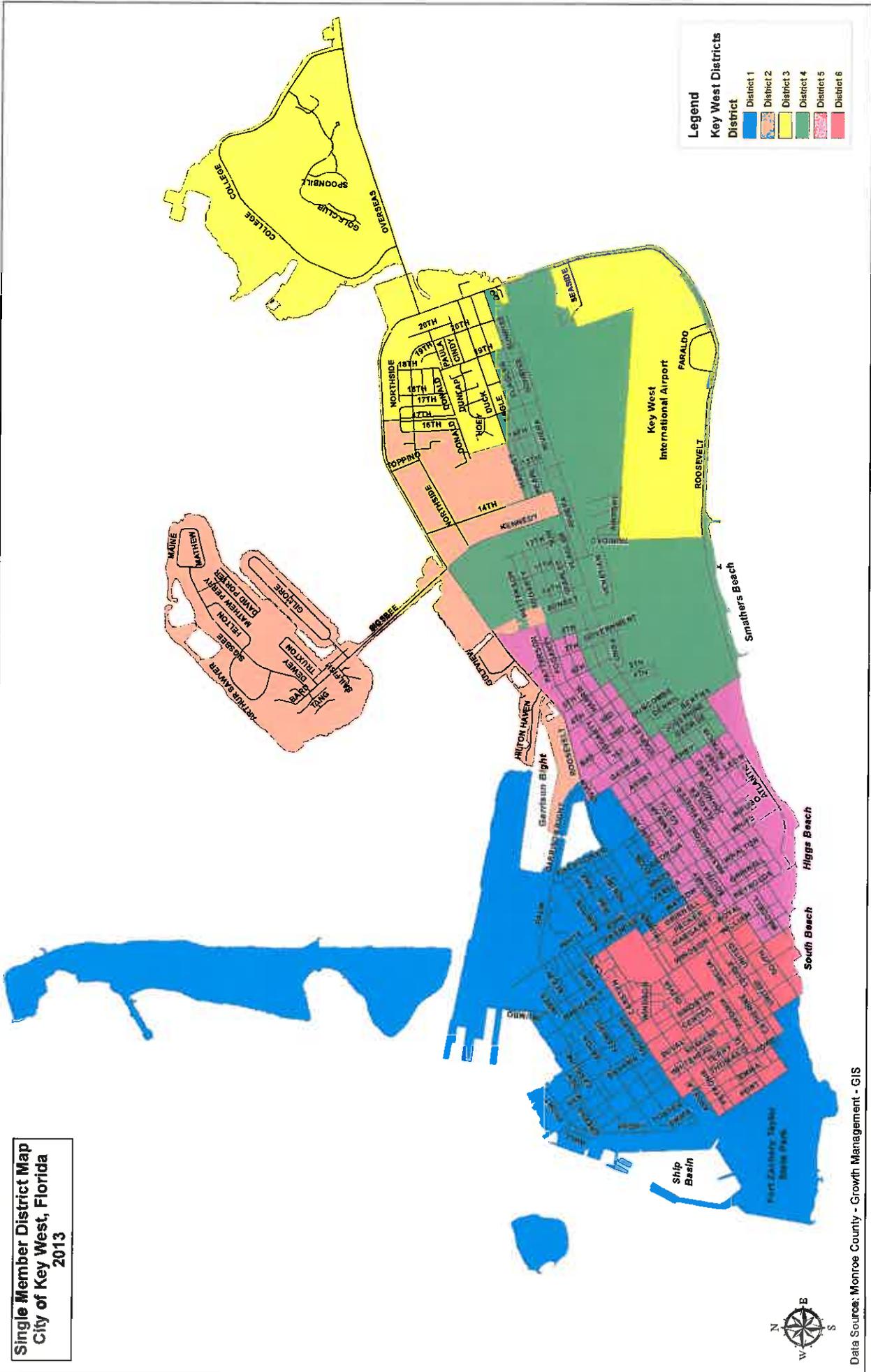
## **Map Exhibits 4-9**



X-Zones Shaded Areas



**Single Member District Map  
City of Key West, Florida  
2013**



Data Source: Monroe County - Growth Management - GIS





Panel Number: 12087C-1504K

Panel Number: 12087C-1508K

Panel Number: 12087C-1509K

Panel Number: 12087C-1512K

Panel Number: 12087C-1516K

Panel Number: 12087C-1517K

Zone 2 - 24 CT. ANNUAL CHANCE FLOOD HAZARD (EL. 9999)

Zone 1 - 1% ANNUAL CHANCE FLOOD HAZARD (EL. 9999)

Zone 3 - 1% ANNUAL CHANCE FLOOD HAZARD (EL. 9999)

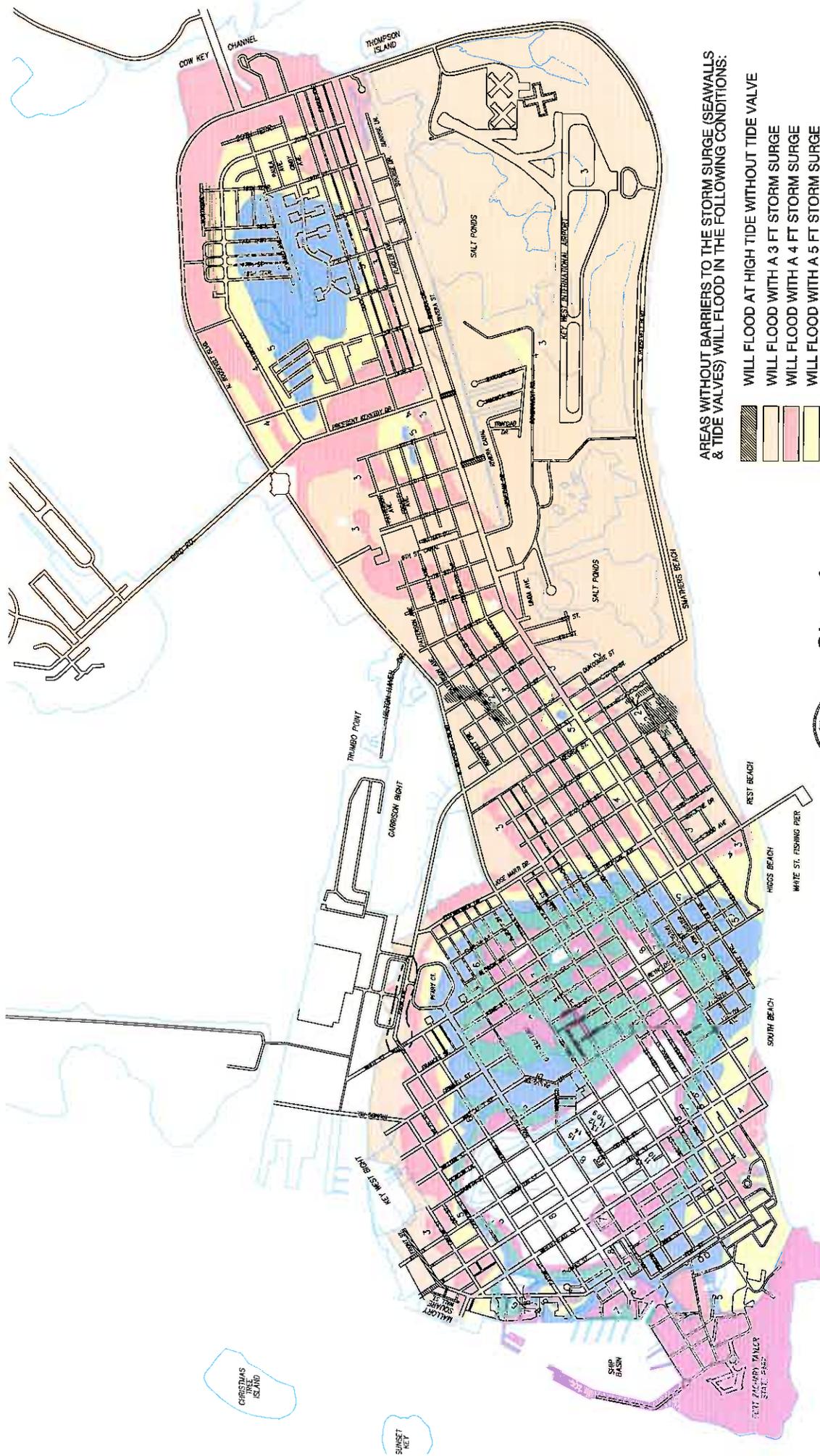
Smathers Beach

White Street Pier

Zone VI (EL. 13)

LOWER WATER (EL. 8-850)





AREAS WITHOUT BARRIERS TO THE STORM SURGE (SEAWALLS & TIDE VALVES) WILL FLOOD IN THE FOLLOWING CONDITIONS:

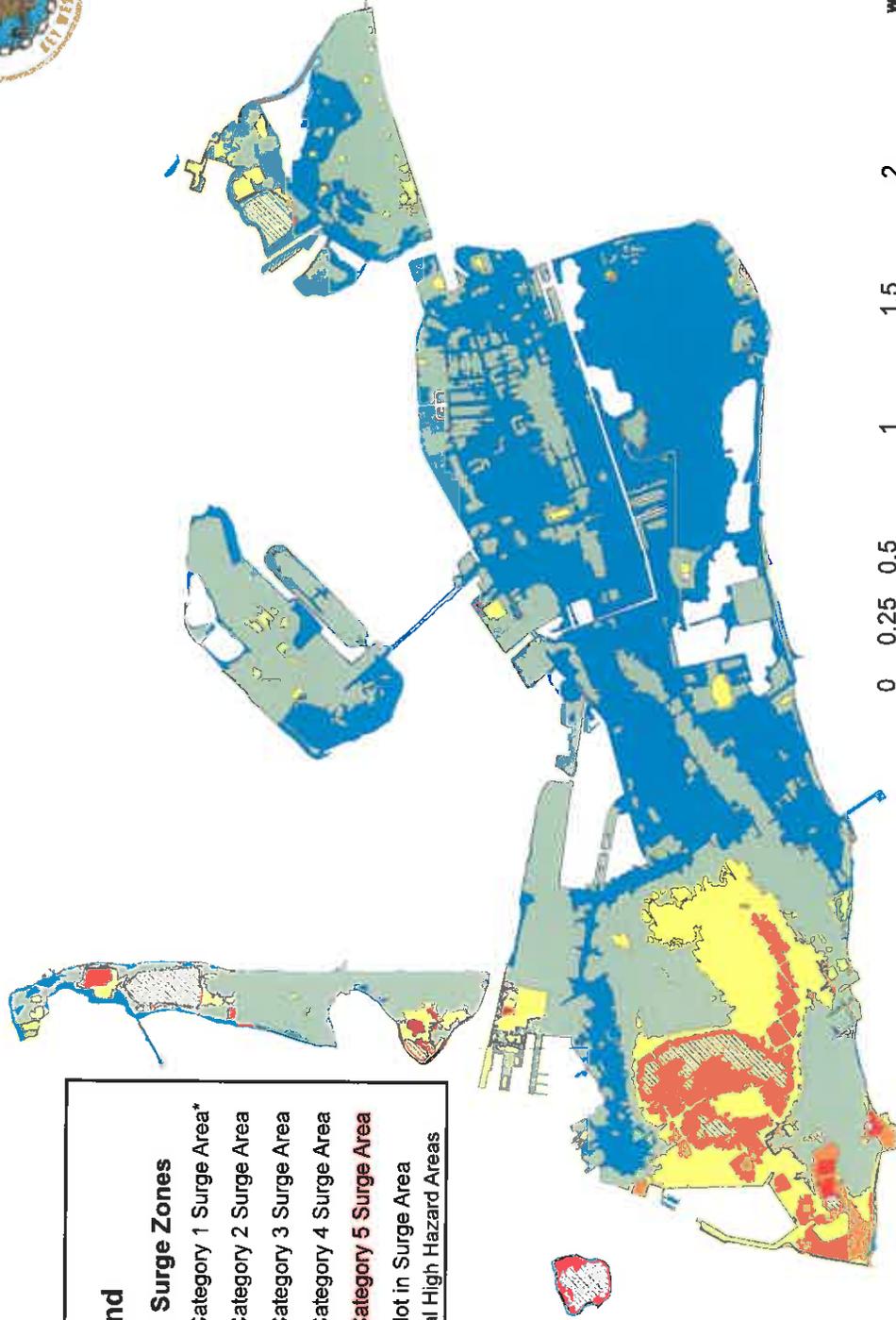
- WILL FLOOD AT HIGH TIDE WITHOUT TIDE VALVE
- WILL FLOOD WITH A 3 FT STORM SURGE
- WILL FLOOD WITH A 4 FT STORM SURGE
- WILL FLOOD WITH A 5 FT STORM SURGE
- WILL FLOOD WITH A 6 FT STORM SURGE
- WILL FLOOD WITH A 7 FT STORM SURGE
- WILL FLOOD WITH A 8 FT STORM SURGE

STORM TIDE = STORM SURGE + ASTRONOMICAL TIDE



**City of Key West**  
 ENGINEERING SERVICES  
 DWS. NO.: B-483 10/06/05

This map shows areas of the City that are subject to inundation by storm surge associated with hurricane events. The Category 1 Surge Area is the City's Coastal High Hazard Area. Data Source: Statewide Regional Evacuation Study Program.



**Legend**

**Storm Surge Zones**

- Category 1 Surge Area\*
- Category 2 Surge Area
- Category 3 Surge Area
- Category 4 Surge Area
- Category 5 Surge Area
- Not in Surge Area
- \* Coastal High Hazard Areas

**CITY OF KEY WEST - Storm Surge Zones - October 2012**



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# **Exhibit 10**

## **Community Rating System (CRS) Points system and insurance rates**

*This report is intended to explain the freeboard credit opportunities offered by the CRS/ FEMA in order to further reduce insurance rates. It will further inform the reader about additional flood insurance rate opportunities that are available to the City; however, the proposed referendum language does not include freeboard requirements explained below.*

The City is currently in the process of reapplying to become part of the NFIP's Community Rating System (CRS). Once the City can prove intent to comply with FEMA requirements and is allowed to participate in the Community Rating System, overall flood insurance rates will be reduced throughout the City. There are additional regulatory measures the City can take to increase our CRS rating, and reduce insurance rates further, including freeboard credits. In order to receive CRS credit for freeboard the following must be considered:

Although allowing property owners to voluntarily elevate to a desired freeboard elevation **may** generate **minimal** CRS point advantage, the Code needs to have a **freeboard requirement** in order to receive full freeboard CRS credit. This would result in a Code requirement that new buildings and those substantially improved, must be elevated to a specified freeboard elevation (IE: BFE + 2', 3' or 4').

### **Commercial Structures:**

For **full** CRS points, the freeboard requirement must include that Floodproofed structures also need to be elevated to the required freeboard elevation requirement.

### **Mechanical Equipment:**

For **full** CRS points, the freeboard requirement must include the same elevation - or floodproofing - for all mechanical systems (ductwork\*, electrical, heating, ventilation, plumbing, A/C equipment and other service facilities. \*No adequate and reasonably priced waterproofing of ductwork has yet been identified).

- If buildings have a freeboard requirement, but the mechanical systems noted above only require elevation to BFE than the CRS credit is 75% of the full credit.
- If buildings have a freeboard requirement, then the mechanical systems listed above must be elevated to at least BFE. If not, there isn't any CRS credit for freeboard.

### **CRS Point System Standards and Cost Benefit analysis**

For every 500 points the CRS rating is elevated one class, or an additional 5% off insurance rates. CRS Credits are given for up to 3-feet of freeboard as follows:

- Freeboard of 3' = 375 CRS Points (Results in 2' of additional freeboard over the 1' FBC freeboard requirement).
- Freeboard of 2' = 325 CRS points (Results in 1' of additional freeboard over the 1' FBC freeboard requirement).

- Freeboard of 1' = 100 CRS points (presently required by FBC).
- Beyond 3', special credit is only available if the City provides additional information to warrant the higher credit, such as a demonstrated expectation of new growth in the area.

Additional CRS points are awarded if the City creates regulations that:

- Prohibits construction on fill = 80 points
- Requires compensatory storage if fill is utilized = 25 points