

**Office of the Public Works Dept.**

City of Richland Hills, Texas

## Memorandum

To: Honorable Mayor Bill Agan and members of the Richland Hills City Council  
From: Michael H. Barnes, P.E. Public Works Director  
Date: May 23, 2013  
Subject: FEMA Community Rating System

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### **Council Action Requested:**

Authorize the Halff Associates preparation of an application to participate in the Federal Emergency Management Administration (FEMA) Community Rating System (CRS) in the amount of \$8,000.00.

### **Background Information:**

In 2012 FEMA released new information regarding the 2012 National Floodplain Insurance Program (NFIP) Reform Act (BW-12) that has the potential to raise insurance rates for residents currently located in the 100 year floodplain. According to FEMA the rates are being changed to reflect the true cost of the anticipated damage to residents located in the 100 year floodplain.

Currently there are 122 NFIP policies in Richland Hills which means that there are 122 property owners that are paying yearly premiums to insurance companies. Of the 122 current policies, 75 will be affected by BW-12.

In order to assist Richland Hills residents by mitigating FEMA raising the NFIP rates, FEMA has a volunteer program entitled Community Rating System (CRS) that recognizes community efforts beyond those minimum standards by reducing flood insurance premiums for the community property owners. The CRS is similar to, but separate from, the private insurance industry programs that grade communities on the effectiveness of their fire suppression and building code enforcement. CRS discounts on flood insurance premiums range from 5% to 45%. Those discounts provide an incentive

for new flood insurance protection activities that can save lives and property in the event of a flood.

To participate in the CRS the city can choose to undertake some or all of the 18 public information and floodplain management activities described in the CRS Coordination Manual, attached. Many of the activities are ones that we either already do or are proposing.

The CRS assigns credit points for each Rate Class (RC) from 0 to 10. The community will earn points according to the FEMA requirements the city meets. The more points earned the higher the percentage of rate deduction. Residential insurance rate reductions can range from 5% for 500 to 999 points to 45% for 4,500+ points in multiples of 5% for each class.

For Richland Hills it is feasible to receive a RC of 7 (1500-1999 points or 15% rate reduction) or a possible RC of 6 (2000-2499 or 20% rate reduction). Once a community has been approved into the CRS the city may continue to lower their RC by earning additional points. Therefore, it is very important for a community to be accepted into the CRS and then continue to earn points to earn a higher RC.

Halff Associates expert in floodplain management is John Ivey, P.E. Mr. Ivey has over 40 years expertise in this field and is a well known expert in this field. Mr. Ivey will be the lead person coordinating with RH staff to determine the items of work that the city can economically achieve. Attached is Halff Associates proposal to assist the city in the preparation and submittal of the application to FEMA. The total cost to for this application is \$8,000.00. The funds spent on the application will be returned many times over in future years in rate reduction cost savings for residents paying flood insurance premiums. Staff anticipates CRS approval by the end of 2013. Therefore, staff is pleased to submit this proposal for council approval at their June 4, 2013 council meeting. Please contact me if you have any questions.

**Board/Citizen Input:**

N/A

**Financial Impact:**

\$8,000.00 will be taken from the Drainage Utility Fund.

**Staff Contacts:**

Michael Barnes, P.E. Director of Public Works

817-616-3835

[mbarnes@richlandhills.com](mailto:mbarnes@richlandhills.com)

**Attachments:** CRS Manual Guide, Halff Associates Proposal and Contract

May 9, 2013  
AVO 1010.13

Michael H. Barnes, P.E.  
Director of Public Works  
City of Richland Hills  
3200 Diana Dr.  
Richland Hills, TX 76118

Re: City of Richland Hills CRS Application

Dear Mr. Barnes:

Halff Associates, Inc. is pleased to submit our cost proposal to assist the City of Richland Hills in applying for FEMA's Community Rating System (CRS) Program. Halff Associates is currently working with the cities of Sugarland and Dallas on CRS issues. We applaud the City's initiative to participate in the CRS Program. Currently there are only 54 Texas communities that have been accepted into FEMA's CRS Program.

During previous meetings and projects we identified many CRS activities that the City of Richland Hills has already made significant progress. Halff Associates proposes to assist the City with documentation of CRS credits, preparation of the CRS application and coordination with FEMA, the Texas Water Development Board (TWDB) and Insurance Services Office (ISO). The following CRS Activities will be the target of the CRS application:

- 230 Verification of CRS Credits
- 310 Elevation Certificate (use and documentation)
- 320 Map Information Service
- 330 Outreach Projects (web based and correspondence)
- 350 Flood Protection Information
- 360 Flood Protection Assistance
- 410 Additional Flood Data (Provided by NCTCOG)
- 420 Open Space Preservation (City of Richland Hills acquisition of flood prone properties)
- 440 Flood Data Maintenance
- 450 Storm water Management

- 500/501 Flood Damage Reduction/ Repetitive Loss List
- 510 Floodplain Management Planning (FEMA approved Mitigation Plan)
- 540 Drainage System maintenance

A Community Assistance Visit (CAV) will be conducted by TWDB to verify that the City's floodplain management program is in compliance with FEMA and NFIP requirements to expedite the City of Richland Hills's entry into the CRS Program.

Halff Associates proposes that the proposed work effort be accomplished in four (4) work sessions at the City of Richland Hills to compile the needed CRS Program documentation and prepare the CRS application with an engineer fee not to exceed \$8,000.00. Halff Associates is also available to assist the City with any future meetings with FEMA, TWDB and ISO representatives as you continue participation in CRS. We have identified five (5) recommended phases for the City regarding the CRS Program. This proposal covers only Phase 1 and we recommend that the City consider additional phases that can be imitated and accomplished during the initial 5-year CRS certification cycle. Many of the identified tasks can be accomplished by City staff or contracted to a consultant.

Phase 1. Prepare and submit the CRS application; respond to ISO review comments; and participate in a Community Assistance Visit (CAV) performed by TWDB or FEMA.

Phase 2. Prepare CRS Year 1 Status Report; review CRS activities and, if warranted, submit documentation to ISO/FEMA to improve the initial CRS classification.

Phase 3. Incorporate additional CRS activities that will benefit NFIP policy holders within the City impacted by the 2012 NFIP Reform Act (Biggert Watters Act also known as BW-12).

Phase 4. Initiate a survey effort to establish lowest floor elevations of structures located in the Special Flood Hazard Area (SFHA) that have been or will be impacted by implementation of the 2012 NFIP Reform Act. This elevation information will assist property owners obtain the lowest possible flood insurance premium rates.

Phase 5. Respond to future CRS program changes and update the City of Richland Hills CRS program as needed to improve the City CRS classification.

We have attached example CRS work sheets that we are currently utilizing with other communities to assist them with CRS Activities. During the proposed CRS work session we will share this information with the City in hopes to identify additional CRS credits to achieve future higher CRS ratings for the City of Richland Hills.

Thank you for considering Halff Associates for this important project. We have CRS trained floodplain managers available to assist the City and can initiate the initial CRS research and documentation effort as soon as your schedule will allow. We anticipate questions from Ms Janine Ellington, ISO, regarding the CRS application and will submit requested documentation as required.

If you have any questions or desire additional information please contact John Ivey at (817) 847-1422.

Sincerely,

**HALFF ASSOCIATES, INC.**

John Ivey, PE, CFM  
Vice President

Enc.

**City of Richland Hills  
Community Rating System (CRS) Application  
Description of Activities**

It appears that the City of Richland Hills currently qualifies for CRS credits in 12 activity categories identified by FEMA. The requirements for the CRS Program are outlined in the CRS Coordinator's Manual, FIA-15/2013, which is on file in the City of Richland Hills Floodplain Manager.

The City of Richland Hills CRS Application was prepared in \_\_\_\_\_, by the Public Works Department with assistance from Halff Associates, Inc., consultant. The City of Richland Hills CRS activities and requirements are as follows:

**310 Elevation Certificates:**

The City of Richland Hills will maintain Elevation Certificates for all building constructed or substantially improved in the SFHA.

Requirements:

Beginning on the date when the CRS Application is submitted to FEMA, Elevation Certificates must be filed with Building Permits issued by the City of Richland Hills Floodplain Manager for structures located in the SFHA.

**320 Map Information:**

Map Information and Flood Insurance Purchase Requirements: The City of Richland Hills Floodplain Manager maintains a log that notes the date, the address or location of the property, and that the inquirer was advised on the following issues:

- is subject property located within the special flood hazard area (SFHA),
- permit and development requirements, and/or
- flood insurance purchase requirements, if applicable.

Map and Study Library: The City of Richland Hills Floodplain Manager maintains copies of current and previously published Flood Insurance Studies, FIRM's, LOMC's and technical data.

Updated Maps: The City of Richland Hills Floodplain Manager maintains effective (current) copies of the Tarrant County Flood Insurance Rate Maps and copies of Letters of Map Change (LOMC) that have revised or updated the effective FIRM's within the City.

Requirements:

- (1) City of Richland Hills Floodplain Manager maintains a log of map information services provided.
- (2) Publicized Map Information Service: The City of Richland Hills publishes an annual notice to all properties within the City describing the map information services and assistance available.

**330 Outreach Projects:**

The City of Richland Hills publishes an annual outreach project to all properties within the City that addresses:

Local Flood Hazard  
Flood Safety  
Flood Insurance

Flood Hazard Map  
Permit Requirements  
Substantial Improvements

## Property Protection

## Drainage Requirements

The City of Richland Hills Brochure, “How to get a Building Permit” is available at the City of Richland Hills Public Works Department where building permits are issued.

### Requirements:

Annual Outreach Project: The City of Richland Hills publishes an annual notice that is received at all properties within the City.

### **350 Flood Protection Information**

List of publications on file at the City of Richland Hills Public Library, and or posted on the City website:

Tarrant County Flood Insurance Study, FEMA, 2009  
Tarrant County Flood Insurance Rate Maps, FEMA, 2009  
Floodplain Management in Texas, Quick Guide 2008  
How to Use a Flood Map to Protect Your Property, FEMA-238, May 1995  
Answers to Questions about the National Flood Insurance Program, FEMA-387, 2001  
Mandatory Purchase of Flood Insurance Guidelines, FEMA-186, September 1999  
Repairing your Flooded Home, FEMA-234, 1992  
Homeowners Guide to Retrofitting, FEMA-312, 1998  
Above the Flood: Elevating Your Floodprone House, FEMA-347, 2000  
Elevated Residential Structures, FEMA-54, March 1984  
Manufactured Home Installation in Flood Prone Areas, FEMA-85, September 1985  
Floodproofing Nonresidential Structures, FEMA-102, May 1986  
Design Guide for Retrofitting Flood-prone Residential Structures, FEMA-114, 1986  
A Unified National Program for Floodplain Management, FEMA-248, 1994  
Design Guidelines for Flood Damage Reduction, FEMA-15, December 1981  
Planning for a Sustainable Future: The Link Between Hazard Mitigation and Livability, FEMA-364, 2000  
Protecting Floodplain Resources, A Guidebook for Communities, FEMA-268, 1995

### Requirements:

FEMA requires a statement (certification) from the head of the library certifying that these publications have been entered into the Library Card Catalog or indexing system and that the Library will maintain adequate numbers of the documents to meet the demand.

FEMA and NFIP publications can be ordered at no cost from [www.fema.gov](http://www.fema.gov).

### **360 Flood Protection Assistance**

The City of Richland Hills Floodplain Manager maintains a log that notes the date, the address or location of the property, and documents that the inquirer was advised:

- is subject property located within the special flood hazard area (SFHA),
- permit and development requirements,
- historical flooding information, if available,
- advice regarding retrofitting or floodproofing techniques

Information is supplied to inquirers regarding local contractors and consultants that are knowledgeable or experienced in retrofitting techniques and construction.

Information is supplied to inquirers on how to select a qualified contractor and on what recourse people have if they are dissatisfied with a contractor's performance.

Requirements:

- (1) City of Richland Hills Floodplain Manager maintains a log of flood protection assistance provided.
- (2) Material is provided to inquirers regarding local contractors and consultants knowledgeable or experienced in retrofitting techniques and construction.
- (3) Material is provided to inquirers regarding how to select a qualified contractor and on what recourse people have if they are dissatisfied with a contractor's performance.

### **430 Higher Regulatory Standards**

The City of Richland Hills has adopted the following "higher regulatory standards" that exceed the minimal National Flood Insurance Program (NFIP) regulations (44CFR):

The City of Richland Hills Flood Damage Prevention Ordinance \_\_\_\_\_ adopted \_\_\_\_\_, and the City of Richland Hills \_\_\_\_\_ Ordinance \_\_\_\_\_ adopted \_\_\_\_\_, contain provisions that exceed the minimal National Flood Insurance Program (NFIP) regulations (44CFR).

The floodplains within the City of Richland Hills are defined by the limits of the “Base Flood”, which is the flood having a one percent (1%) chance of being equaled or exceeded in any given year, based upon existing watershed conditions.

Substantial improvements is any combination of repairs, reconstruction or improvements of a structure, the cumulative effect of which equals or exceeds fifty percent (50%) of the square footage of the structure. ....including incremental improvements over a period of time, the cumulative effect of which equals or exceeds fifty percent (50%) of the square footage of the structure at the time of the first improvement.... CRS Activity 430.c and CRS Activity 430.d

Residential construction ...shall have the lowest floor elevated at least one foot (1’) above the Base Flood (existing watershed conditions) elevation. [ ]

Pad elevations for residential lots raised out of the floodplain shall be at elevated above the elevation of the Base Flood. [ ]..... CRS Activity 430.a

Nonresidential construction.... shall have the lowest floor elevated at least one foot (1’) above the Base Flood (existing watershed conditions) elevation. [ ]

or...be floodproofed ...one foot (1’) above the elevation of the Base Flood. [ ]

Manufactured Homes ...stands or lots are elevated on compacted fill, so that the lowest floor of the manufactured home will be at least one foot (1’) above the elevation of the Design Flood.

[ ] CRS Activity 430.o

Streets, Parking Lots and Bridges.... The top of curb or street crown of all new streets to be built in reclaimed floodplain areas shall be at lease one foot (1’) above the Base Flood elevation. The low beam of all new bridges to be constructed across floodplains shall be a minimum of one foot (1’) above the elevation of the Base Flood. [ ]

Fill Areas....design engineers proposing the reclamation shall demonstrate that the fill will not settle below the design elevation of the fill; and that the fill will be adequately protected from erosion, scour or differential settlement [ ] CRS Activity 430.b

No new construction is allowed in floodplain areas, but construction is allowed in those areas that can be reclaimed from the floodplain. [ ] CRS Activity 430.f

In addition to the FEMA Regulatory Floodway, the City of Richland Hills uses a natural floodway which is the natural channel and floodplain that is effective in conveying the Design Flood. [ ]

The City of Richland Hills has adopted both the International Residential Code and the International Building Code. CRS Activity 430.m

The City of Richland Hills Building Code Effectiveness Grading Schedule is **Class 6** which qualifies the City to obtain a CRS rating of 7 or better. CRS Activity 430.m.

### **431 Land Development Criteria**

No new construction is allowed in floodplain areas, but construction is allowed in those areas that can be reclaimed from the floodplain. [\_\_\_\_\_] CRS Activity 431.a.

In new subdivisions, the developer shall provide all the necessary easements and rights-of-way required for drainage structures, including storm sewers and open or paved channels. [Ordinance \_\_\_\_\_ Section \_\_\_\_\_]

In addition to the FEMA Regulatory Floodway, the City of Richland Hills uses a natural floodway which is the natural channel and floodplain that is effective in conveying the Design Flood. [\_\_\_\_\_]

### **440 Flood Data Maintenance**

The City of Richland Hills Floodplain Manager maintains a Geographic Information System (GIS) which is also accessible to the public at [www.Sugarlandtx.gov](http://www.Sugarlandtx.gov).

The City of Richland Hills GIS system includes:

FEMA floodplain boundaries

Corporate limits

Streets

Parcel (lot) boundaries

Aerial mapping layer showing building location

FEMA floodways

FEMA BFE's

FEMA Flood Zone Designations

FEMA 500-year flood boundary

FEMA FIRM's overlay

Mitigation Overlays in cooperation with the NCTCOG website at [www.nctcog.org](http://www.nctcog.org)

NCTCOG HAZMAP GIS overlays posted on [www.nctcog.org](http://www.nctcog.org)

The City of Richland Hills maintains an elevation reference mark database. Developers are required to establish new RM's if needed for the proposed development.

The City of Richland Hills maintains updated copies of FEMA FIRM's and issued LOMC's. Tarrant County FIRM Panels \_\_\_\_\_ and \_\_\_\_\_ include areas within the City of Richland Hills. Tarrant County FIRM Panel 48XXX (2009) has had \_\_ LOMC's and FIRM Panel 48XXXX (2009) has had \_\_ LOMC's which are on file at the City of Richland Hills Floodplain Manager.

Requirements;

The documents referenced above must be on file at the City of Richland Hills Floodplain Manager.

### **450 Stormwater Management**

The City of Richland Hills enforces Ordinance \_\_\_\_\_ that amended Chapter \_\_, Subdivision Regulations Article \_\_, Section \_\_\_\_\_, Drainage and Storm Sewers and Section \_\_\_\_\_, Detention Ponds. The design storm for storm sewers is the **ten (10)** year return frequency as required by CRS Activity 451.a. The design storm for detention ponds is the **25, 50 or 100-year** as determined by the Director of Engineering.

Fill Areas....design engineers proposing the reclamation shall demonstrate that the fill will not settle below the design elevation of the fill; and that the fill will be adequately protected from erosion, scour or differential settlement [\_\_\_\_\_] CRS Activity 451.d

### **500 Repetitive Loss Requirements**

There are \_\_\_\_\_ Repetitive Loss Properties located within the City of Richland Hills. Therefore the City of Richland Hills is a Category \_\_\_\_ "C" \_\_\_\_ Repetitive Loss Community.

### **510 Floodplain Management Planning**

The City of Richland Hills participated in the City of Fort Worth Hazard Mitigation Action Plan (HAZMAP) effort that included a Multi-Hazard Risk Assessment, Flood Hazard Assessment and

submittal to the Governors Division of Emergency Management. Therefore the City will apply for CRS Activity 510 credits for the Floodplain Management Planning aspects of the Fort Worth Plan.

The Fort Worth HAZMAP and accompanying GIS mapping is available on line at [www](#)\_\_\_\_\_.

### **540 Drainage System Maintenance**

The City of Richland Hills Department of Public Works conducts annual inspections, inspections after major storm events, and inspections in response to citizen complaints.

Channel maintenance is performed by the City of Richland Hills Public Works Department.

Specific Problem Sites: Annual maintenance (mow and shred) is conducted on the various levees and floodplain channels located in the City of Richland Hills. Inspection reports and correspondence is on file in the City of Richland Hills Floodplain Manager.

The City of Richland Hills Capital Improvement Program (CIP) includes funding for drainage system maintenance projects identified by the City of Richland Hills Floodplain Manager.

The City of Richland Hills Operating Budget includes drainage system maintenance funding for the City of Richland Hills Public Works Department.

The City of Richland Hills has posted “no dumping” signs at problem sites and the City of Richland Hills **Environmental Police** (?) enforces the City Ordinance prohibiting illegal dumping within the City.

Requirement:

City of Richland Hills inspection reports must be on file for review by FEMA and ISO.

### **630 Dam Safety**

The City of Richland Hills does not own or operate a dam.

The Texas Commission on Environmental Quality (TCEQ) is the state agency responsible for dam safety and the City claims CRS benefits for the State Program.





National Flood Insurance Program  
**Community Rating System**

A Local Official's Guide to  
Saving Lives  
Preventing Property Damage  
Reducing the Cost of Flood Insurance

FEMA 573



**FEMA**

## How the Community Rating System Works

Every year, flooding causes hundreds of millions of dollars' worth of damage to homes and businesses around the country. Standard homeowners and commercial property policies do not cover flood losses. So, to meet the need for this vital coverage, the Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP).

The NFIP offers reasonably priced flood insurance in communities that comply with minimum standards for floodplain management.

The NFIP's Community Rating System (CRS) recognizes community efforts beyond those minimum standards by reducing flood insurance premiums for the community's property owners. The CRS is similar to — but separate from — the private insurance industry's programs that grade communities on the effectiveness of their fire suppression and building code enforcement.

CRS discounts on flood insurance premiums range from 5% up to 45%. Those discounts provide an incentive for new flood protection

activities that can help save lives and property in the event of a flood.

To participate in the CRS, your community can choose to undertake some or all of the 18 public information and floodplain management activities described in the *CRS Coordinator's Manual*.

You're probably already doing many of these activities. To get credit, community officials will need to prepare an application documenting the efforts.

The CRS assigns credit points for each activity. Table 2 lists the activities and the possible number of credit points for each one. The table also shows the average number of credit points communities earn for each activity. These averages may give a better indication than the maximums of what your community can expect.

To be eligible for a CRS discount, your community must do Activity 310, Elevation Certificates. If you're a designated repetitive loss community, you must also do Activity 510,



Floodplain Management Planning.  
 All other activities are optional.

Based on the total number of points your community earns, the CRS assigns you to one of ten classes. Your discount on flood insurance premiums is based on your class.

For example, if your community earns 4,500 points or more, it qualifies for Class 1, and property owners

in the floodplain get a 45% discount. If your community earns as little as 500 points, it's in Class 9, and property owners in the floodplain get a 5% discount. If a community does not apply or fails to receive at least 500 points, it's in Class 10, and property owners get no discount.

Table 1, below, shows the number of points required for each class and the corresponding discount.

**Table 1:**

**How much discount property owners in your community can get**

Rate Class	Discount		Credit Points Required
	SFHA*	Non-SFHA**	
1	45%	10%	4,500 +
2	40%	10%	4,000 - 4,499
3	35%	10%	3,500 - 3,999
4	30%	10%	3,000 - 3,499
5	25%	10%	2,500 - 2,999
6	20%	10%	2,000 - 2,499
7	15%	5%	1,500 - 1,999
8	10%	5%	1,000 - 1,499
9	5%	5%	500 - 999
10	0%	0%	0 - 499

\* Special Flood Hazard Area  
 \*\* Preferred Risk Policies are available only in B,C, and X Zones for properties that are shown to have a minimal risk of flood damage. The Preferred Risk Policy does not receive premium rate credits under the CRS because it already has a lower premium than other policies. Although they are in SFHAs, Zones AR and A99 are limited to a 5% discount. Premium reductions are subject to change.

Table 2:

**What You Can Do to Get Credit**

The CRS grants credit for 18 different activities that fall into four series:

Series	Public Information	Maximum Points*	Average Points*
300	<p>This series credits programs that advise people about the flood hazard, flood insurance, and ways to reduce flood damage. The activities also provide data that insurance agents need for accurate flood insurance rating.</p>		
310	<p><b>Elevation Certificates</b></p> <ul style="list-style-type: none"> <li>Maintain FEMA elevation certificates for new construction in the floodplain. (At a minimum, a community must maintain certificates for buildings built after the date of its CRS application.)</li> </ul>	162	69 ✓
320	<p><b>Map Information Service</b></p> <ul style="list-style-type: none"> <li>Provide Flood Insurance Rate Map (FIRM) information to people who inquire, and publicize this service.</li> </ul>	140	138 ✓
330	<p><b>Outreach Projects</b></p> <ul style="list-style-type: none"> <li>Send information about the flood hazard, flood insurance, flood protection measures, and/or the natural and beneficial functions of floodplains to flood-prone residents or all residents of a community.</li> </ul>	380	90 ?
340	<p><b>Hazard Disclosure</b></p> <ul style="list-style-type: none"> <li>Real estate agents advise potential purchasers of flood-prone property about the flood hazard.</li> <li>Regulations require notice of the hazard.</li> </ul>	81	19 ✓
350	<p><b>Flood Protection Information</b></p> <ul style="list-style-type: none"> <li>The public library and/or community's website maintains references on flood insurance and flood protection.</li> </ul>	102	24 ✓
360	<p><b>Flood Protection Assistance</b></p> <ul style="list-style-type: none"> <li>Give inquiring property owners technical advice on how to protect their buildings from flooding, and publicize this service.</li> </ul>	71	53 ✓
<b>Series 300</b>	<b>Total</b>	<b>936</b>	<b>393</b>

\*Maximum and average points are subject to change. See the current CRS Coordinator's Manual for the latest information.

Series 400	Mapping and Regulations	Maximum Points*	Average Points*
	This series credits programs that provide increased protection to new development.		
410	<b>Additional Flood Data</b> <ul style="list-style-type: none"> <li>• Develop new flood elevations, floodway delineations, wave heights, or other regulatory flood hazard data for an area not mapped in detail by the flood insurance study.</li> <li>• Have a more restrictive mapping standard.</li> </ul>	1,346	86
420	<b>Open Space Preservation</b> <ul style="list-style-type: none"> <li>• Guarantee that currently vacant floodplain parcels will be kept free from development.</li> </ul>	900	191 ✓
430	<b>Higher Regulatory Standards</b> <ul style="list-style-type: none"> <li>• Require freeboard.</li> <li>• Require soil tests or engineered foundations.</li> <li>• Require compensatory storage.</li> <li>• Zone the floodplain for minimum lot sizes of 1 acre or larger.</li> <li>• Require coastal construction standards in AE Zones.</li> <li>• Have regulations tailored to protect critical facilities or areas subject to special flood hazards (for example, alluvial fans, ice jams, subsidence, or coastal erosion).</li> </ul>	2,740	166 ✗
440	<b>Flood Data Maintenance</b> <ul style="list-style-type: none"> <li>• Keep flood and property data on computer records.</li> <li>• Use better base maps.</li> <li>• Maintain elevation reference marks.</li> </ul>	239	79 ✓
450	<b>Stormwater Management</b> <ul style="list-style-type: none"> <li>• Regulate new development throughout the watershed to ensure that post-development runoff is no worse than pre-development runoff.</li> <li>• Regulate new construction to minimize soil erosion and protect or improve water quality.</li> </ul>	670	98
<b>Series 400</b>	<b>Total</b>	<b>5,895</b>	<b>620</b>

Series 500	Flood Damage Reduction	Maximum Points*	Average Points*
	This series credits programs that reduce the flood risk to existing development.		
510	<b>Floodplain Management Planning</b> <ul style="list-style-type: none"> <li>• Prepare, adopt, implement, and update a comprehensive flood hazard mitigation plan using a standard planning process.                (This is a minimum requirement for all repetitive loss communities.)</li> </ul>	359	115
520	<b>Acquisition and Relocation</b> <ul style="list-style-type: none"> <li>• Acquire and/or relocate flood-prone buildings so that they are out of the floodplain.</li> </ul>	3,200	213
530	<b>Flood Protection</b> (Protection of existing floodplain development by floodproofing, elevation, or minor structural projects.)	2,800	93
540	<b>Drainage System Maintenance</b> <ul style="list-style-type: none"> <li>• Conduct periodic inspections of all channels and retention basins, and remove debris as needed.</li> </ul>	330	232 ✓
<b>Series 500</b>	<b>Total</b>	<b>6,689</b>	<b>653</b>

*7064 1/2013*

Series 600	Flood Preparedness	Maximum Points*	Average Points*
	This series credits flood warning, levee safety, and dam safety projects.		
610	<b>Flood Warning Program</b> • Provide early flood warnings to the public, and have a detailed flood response plan keyed to flood crest predictions.	255	93 ✓
620	<b>Levee Safety</b> • Maintain existing levees not otherwise credited in the flood insurance rating system that provide some flood protection.	900	198 ✓
630	<b>Dam Safety</b> (All communities in a state with an approved dam safety program receive some credit.)	175	66
<b>Series 600</b>	<b>Total</b>	<b>1,330</b>	<b>357</b>
<b>All Series</b>	<b>Total</b>	<b>14,850</b>	<b>2,023</b>

## Extra Credit

Your community can get extra credit points — in addition to the points listed in the table — if you coordinate your activities through a comprehensive floodplain management plan. Also, if your community faces growth pressures, the mapping and regulation activities in Series 400 receive extra credit. See the *CRS Coordinator's Manual* for full details.

Many communities can qualify for what the CRS calls “uniform minimum credit,” based on the activities a state or regional agency implements on behalf of its communities. For example, some states have disclosure laws eligible for credit under activity 340, Flood Hazard Disclosure. Any community in those states can receive the uniform minimum credit.

Your community may want to consider floodplain management activities not listed in the *CRS Coordinator's Manual*. You should evaluate these activities for their ability to increase public safety, reduce property damage, avoid economic disruption and loss, and protect the environment. In addition, you can request a review of these activities to determine whether they should be eligible for CRS credit. FEMA welcomes innovative ways to prevent or reduce flood damage.

## How to Apply

Participation in the CRS is voluntary. If your community is in full compliance with the rules and regulations of the NFIP, you may apply. There's no application fee, and all CRS publications are free.

Your community's chief executive officer (that is, your mayor, city manager, or other top official) must appoint a CRS coordinator to handle the application work and serve as the liaison between the community and FEMA. The coordinator should know the operations of all departments that deal with floodplain management and public information. And the coordinator should be able to speak for the community's chief executive officer.

The first step in the application process is to get a copy of the CRS Application, which contains all the instructions and procedures you need for preparing and submitting your community's initial application for a CRS classification. The CRS Application includes easy-to-follow worksheets that provide credits for applicable activities. The CRS Application also identifies the documentation you must submit to support the credits you are requesting.

You may also want to order a copy of the *CRS Coordinator's Manual*, which describes the program in full and provides specific information, including eligible activities, required documentation, and resources for assistance.

Your designated CRS coordinator should fill out and submit your application. Help is also available through the contact information below. The CRS will verify the information and arrange for flood insurance premium discounts.

To order CRS publications at no charge, fax the order form on the following page to 317-848-3578, or mail to the address below. You can also e-mail your request to [nfipcrs@iso.com](mailto:nfipcrs@iso.com). Both the CRS Application and the *CRS Coordinator's Manual* are also available at FEMA's CRS Resource Center website — [www.training.fema.gov/emiweb/crs](http://www.training.fema.gov/emiweb/crs).

For more info, write, phone, or fax:

NFIP/CRS  
P.O. Box 501016  
Indianapolis, IN 46250-1016  
Telephone: 317-848-2898  
Fax: 317-848-3578  
E-mail: [nfipcrs@iso.com](mailto:nfipcrs@iso.com)

**EXHIBIT A**  
**STANDARD FORM OF AGREEMENT FOR PROFESSIONAL SERVICES**  
**BETWEEN**  
**(CLIENT) AND HALFF ASSOCIATES, INC. (ENGINEER)**

**I. SCOPE** - Halff Associates, Inc. (hereinafter "Engineer") agrees to perform the professional services described in the attached Scope of Services which incorporates these terms and conditions. Unless modified in writing by the parties hereto, the duties of Halff shall not be construed to exceed those services specifically set forth in the Scope of Services. The Scope of Services and these General Terms and Conditions, when executed by \_\_\_\_\_, a \_\_\_\_\_ (hereinafter "Client"), shall constitute a binding Agreement on both parties. Engineer shall perform its obligations under this agreement as an independent contractor and not as an agent or fiduciary of any other party.

**II. COMPENSATION** - Client agrees to pay monthly invoices or their undisputed portions within 30 days of receipt. Payment later than 30 days shall include interest at 1-1/2 percent per month or lesser maximum enforceable interest rate, from the date the Client received the invoice until the date Engineer receives payment. Such interest is due and payable when the overdue payment is made.

It is understood and agreed by the parties that Engineer's receipt of payment(s) from Client is not contingent upon Client's receipt of payment, funding, reimbursement or any other remuneration from others.

Time-related charges will be billed as specified in this Agreement. Unless stated otherwise in this Agreement, direct expenses, subcontracted services and direct costs will be billed at actual cost plus a service charge of 10 percent. Mileage will be billed at current IRS rates.

**III. RESPONSIBILITY** - Engineer is employed to render a professional service only, and any payments made by Client are compensation solely for the services rendered and the recommendations made in carrying out the work. Engineer agrees to follow the standard practices of the engineering profession to make findings, provide opinions, make factual presentations, and provide professional advice and recommendations. Nothing contained herein shall be argued to have created any warranty or certification and Engineer shall not be required to provide any certification, assignment or warranty of its work but, upon request and for a separate fee and at Engineer's sole discretion, Engineer may agree to provide certain written statements regarding its services. Such statements shall be in a form acceptable to Engineer and shall be requested with sufficient advance notice to allow Engineer to review the documents and prepare a suitable statement.

Engineer's review or supervision of work prepared or performed by other individuals or firms employed by Client shall not relieve those individuals or firms of complete responsibility for the adequacy of their work. It is understood that any resident engineering or inspection provided by Engineer is for the purpose of determining compliance with the technical provisions of the project specifications and does not constitute any form of guarantee or insurance with respect to the performance of a contractor. Engineer does not assume responsibility for methods or appliances used by a contractor, for safety of construction work, or for compliance by contractors with laws and regulations.

**IV. SCOPE OF CLIENT SERVICES** - Client agrees to provide site access, and to provide those services described in the attached Scope of Services.

**V. OWNERSHIP OF DOCUMENTS** - Upon Engineer's completion of services and receipt of payment in full, Engineer grants to Client a non-exclusive license to possess the drawings and instruments produced in connection with Engineer's performance of the work under this Agreement, if any. Said drawings and instruments may be copied, duplicated, reproduced and used by Client for the

purpose of constructing, operating and maintaining the improvements. Client agrees that such documents are not intended or represented to be suitable for reuse by Client or others for purposes outside the Scope of Services of this Agreement. Notwithstanding the foregoing, Client understands and agrees that any and all computer programs, GIS applications, proprietary data or processes and certain other items related to the services performable under this Agreement are and shall remain the sole and exclusive property of Engineer and may not be used or reused, in any form, by Client without the express written authorization of Engineer. With regard to all drawings and instruments, Client agrees that any reuse by Client, or by those who obtain said information from or through Client, without written verification or adaptation by Engineer, will be at Client's sole risk and without liability or legal exposure to Engineer, Engineer's subconsultants or independent associates. Client agrees to indemnify Engineer, Engineer's subconsultants and independent associates for all damages, liability or cost arising from such reuse. Engineer may reuse all drawings, reports, data and other information developed in performing the services described by this Agreement in Engineer's other activities.

**VI. INDEMNIFICATION** - Engineer agrees to indemnify and hold Client harmless from any actual damages, liability or costs, including reasonable attorney's fees and expenses, to the extent caused directly by the negligent act or omission or willful misconduct of Engineer, Engineer's subconsultants or those for whom Engineer is legally liable, in the performance of the professional services which are the subject of this Agreement.

In the event that Client is found to be concurrently negligent, Engineer shall not indemnify for the proportionate negligence of Client, but shall only indemnify for the portion of negligence solely attributable to Engineer, its agents, servants, employees, and subcontractors of any tier, their agents, servants and employees.

Neither party shall be liable to the other for incidental or consequential damages, whether or not the possibility of such damages has been disclosed or could have been reasonably foreseen.

The parties agree to indemnify one another against damages of third parties recoverable from the indemnitee to the extent caused by the comparative negligence of the indemnitor. Such negligence shall be measured by standards in effect at the time services are rendered, not by later standards.

Client acknowledges that Engineer may perform work at facilities that may contain hazardous materials or conditions, and that Engineer had no prior role in the generation, treatment, storage, or disposition of such materials and shall be indemnified and defended by Client for any and all claims arising out of the presence of hazardous materials or conditions except for those claims as determined by final judgment of a court of competent jurisdiction to arise out of the sole negligence of Engineer.

**VII. INSURANCE** - Engineer shall maintain during the life of the Agreement the following minimum insurance:

- A. Commercial general liability insurance, including personal injury liability, blanket contractual liability, and broad form property damage liability. The limit shall be not less than \$1,000,000.
- B. Automobile bodily injury and property damage liability insurance with a limit of not less than \$1,000,000.
- C. Statutory workers' compensation and employers' liability insurance as required by state law.
- D. Professional liability insurance (Errors and Omissions) with a limit of \$1,000,000 per claim/annual aggregate.

**VIII. SUBCONTRACTS** - Engineer shall be entitled to subcontract any portion of the work described in the Scope of Services.

**IX. ASSIGNMENT** - This Agreement is binding on the heirs, successors, and assigns of the parties hereto. Neither this Agreement, nor any claims, rights, obligations or duties associated hereto, shall be assigned or assignable by either Client or Engineer without the prior written consent of the other party.

**X. INTEGRATION** - These terms and conditions and the letter agreement (Scope of Services) to which they are attached represent the entire understanding of Client and Engineer. No prior oral or written understanding shall be of any force or effect with respect to those matters covered herein. The Agreement may not be modified or altered except in writing signed by both parties.

**XI. JURISDICTION AND VENUE** - This Agreement shall be administered and interpreted under the laws of the State Texas. Exclusive venue shall lie in \_\_\_\_\_ County, Texas.

**XII. SUSPENSION OF SERVICES** - If work under this Agreement is suspended for more than thirty (30) calendar days in the aggregate, the Engineer shall be compensated for services performed and charges incurred prior to receipt of notice to suspend and, upon resumption, an equitable adjustment in fees to accommodate the resulting demobilization and mobilization costs and there also shall be an equitable adjustment in the work schedule based on the delay caused by the suspension. If work under this Agreement is suspended for more than ninety (90) calendar days in the aggregate, the Engineer may, at its option, terminate this Agreement upon giving notice in writing to the Client. Engineer may request that the work be suspended by notifying Client, in writing, of circumstances that are interfering with normal progress of the work. If the Client fails to make payments when due or otherwise is in breach of this Agreement, the Engineer may suspend performance of services upon five (5) calendar days notice to the Client. The Engineer shall have no liability whatsoever to the Client for any costs or damages as a result of such suspension caused by any breach of this Agreement by the Client.

**XIII. TERMINATION OF WORK** - Either the Client or the Engineer may terminate this Agreement at any time with or without cause upon giving the other party ten (10) calendar days' prior written notice. Client agrees that termination of Engineer for Client's convenience shall only be utilized in good faith, and shall not be utilized if the purpose or result is the performance of all or part of Engineer's services under this Agreement by Client or by another service provider. The Client shall within ten (10) calendar days of termination pay the Engineer for all services rendered and all costs incurred up to the date of Engineer's receipt of notice of termination, in accordance with the compensation provisions of this contract.

**XIV. TAXES** - The fees and costs stated in this Agreement, unless stated otherwise, exclude all sales, consumer, use and other taxes. Should regulations, laws, rules or other requirements be promulgated following execution of this Agreement Client agrees to fully reimburse Engineer and its subconsultants for those taxes paid or assessed that were not enforceable as of the date of this Agreement. Notwithstanding the foregoing, it is expressly understood and agreed that this clause shall not apply to taxes associated with reimbursable or other project related expenses, which shall be identified in the applicable invoice for reimbursement by Client.

**XV. ALTERNATIVE DISPUTE RESOLUTION** - Any conflicts or disputes that arise under or through this Agreement or following the completion thereof shall be discussed at a meeting of one senior management person from Client and one from Engineer. This meeting shall be a condition precedent to the institution of any legal or equitable proceedings, unless such meeting will

infringe upon schedules defined by applicable statutes of limitation or repose. Should such a situation arise the parties agree that such meeting shall still be required but the institution of proceedings shall not be precluded for failure to meet this specific meeting requirement.

**XVI. SEVERABILITY** - Should any one or more of the provisions contained in this Agreement be determined by a court of competent jurisdiction or by legislative pronouncement to be void, invalid, illegal, or unenforceable in any respect, such voiding, invalidity, illegality, or unenforceability shall not affect any other provision hereof and this Agreement shall be considered as if the entirety of such void, invalid, illegal, or unenforceable provision had never been contained in this Agreement.

**XVII. TIMELINESS OF PERFORMANCE** - Client recognizes that Engineer must perform its professional services with due and reasonable diligence consistent with sound professional practices.

**XVIII. AGREED REMEDIES** - In recognition of the relative risks and benefits of the Project to both the Client and the Engineer, and acknowledging that the allocation of risks and limitations of remedies are business understandings between the parties and such shall apply to all possible theories of recovery, Client agrees, to the fullest extent permitted by law, and notwithstanding any other provisions of this Agreement or the existence of applicable insurance coverage, that the total liability, in the aggregate, of the Engineer and the Engineer's officers, directors, employees, agents, and subconsultants to the Client or to anyone claiming by, through or under the Client, for any and all claims, losses, costs or damages whatsoever arising out of, resulting from or in any way related to the services under this Agreement from any cause or causes of the Engineer or the Engineer's officers, directors, employees, agents, and subconsultants, shall not exceed the Engineer's fee for the services performed under this Agreement or \$50,000, whichever is greater. Increased limits may be negotiated for additional fee.

Further, it is the intent of the parties to this Agreement that Engineer's services under this Agreement shall not subject Engineer's individual employees, officers or directors to any personal legal exposure for claims and risks associated with the services performed or performable under this Agreement.

**XIX. WAIVER** - Any failure by Engineer to require strict compliance with any provision of this Agreement shall not be construed as a waiver of such provision, and Engineer may subsequently require strict compliance at any time, notwithstanding any prior failure to do so.

**APPROVED:**

Engineer: HALFF ASSOCIATES, INC.

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**APPROVED:**

Client: \_\_\_\_\_

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_