



March 21, 2018

TO: Flood Authority Members

FROM: Scott Boettcher, Staff

SUBJECT: Local Flood Proofing (Centralia Flood Insurance Pilot Project)

The purpose of this memo is to provide background information related to an upcoming pilot in Centralia to scope out solutions to rising flood insurance premiums. We will discuss this at tomorrow's Flood Authority meeting. Feel free to contact me with questions (360/480-6600, scottb@sbgh-partners.com).


















Flood Insurance

Flood insurance is a specialty insurance. It is complicated and not everyone does it. It is expensive, and people are leaving the National Flood Insurance Program if they can. Following attachments provide more information regarding upcoming pilot:

- A. FEMA Federal Flood Insurance Manual (<https://www.fema.gov/media-library/assets/documents/133846>)
- B. FEMA Elevation Certificates (<https://www.fema.gov/media-library/assets/documents/160?id=1383>)
- C. Flood Insurance Is Costly and Increasing
- D. People Are Leaving National Flood Insurance Program if they can
- E. Flood Insurance Rate Example
- F. Proposed Pilot

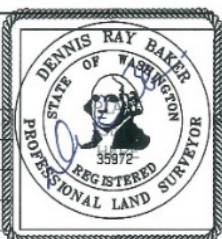
Attachment A

FEMA Federal Flood Insurance Manual (<https://www.fema.gov/media-library/assets/documents/133846>)

Document Collections				
Photo, Video Use Guidelines		Zip file containing all the FIM sections Zip file containing all the FIM sections (2017)	0.03G	August 1, 2017
		Change Package	0.01G	August 1, 2017
		Cover	1.37M	August 1, 2017
		Cover Memo	0.13M	August 1, 2017
		Change Record Page	0.11M	August 1, 2017
		Table of Contents - Section 1	0.15M	August 1, 2017
		Reference - Section 2	0.15M	August 1, 2017
		General Rules - Section 3	0.20M	August 1, 2017
		Application - Section 4	2.28M	August 1, 2017
		Rating - Section 5	5.04M	August 1, 2017
		Condominiums - Section 6	0.56M	August 1, 2017
		Lowest Floor Guide, Section 7	0.01G	August 1, 2017
		Special Certifications - Section 8	5.06M	August 1, 2017
		Preferred Risk Policy (PRP) - Section 9	2.39M	August 1, 2017
		Newly Mapped (NM) - Section 10	2.42M	August 1, 2017
	Mortgage Portfolio Protection Program (MPPP) - Section 11	0.08M	August 1, 2017	
	General Change Endorsement - Section 12	1.27M	August 1, 2017	

Attachment B

FEMA Elevation Certificates (<https://www.fema.gov/media-library/assets/documents/160?id=1383>)



U.S. DEPARTMENT OF HOMELAND SECURITY FEDERAL EMERGENCY MANAGEMENT AGENCY <small>National Flood Insurance Program</small>		ELEVATION CERTIFICATE IMPORTANT: Follow the instructions on pages 1-9.		OMB No. 1660-0008 Expiration Date: July 31, 2015	
SECTION A – PROPERTY INFORMATION				FOR INSURANCE COMPANY USE	
A1. Building Owner's Name Colleen M. Tee				Policy Number:	
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or R.O. Route and Box No. 303 N. Market Street				Company NAIC Number:	
City Bucoda	State WA	ZIP Code 98530			
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) Tax Parcel No. 61800300900					
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) Residential					
A5. Latitude/Longitude: Lat. 46 degrees 46' 02.62" N Long. 122 degrees 51' 53.65" W Horizontal Datum: <input type="checkbox"/> NAD 1927 <input checked="" type="checkbox"/> NAD 1983					
A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.					
A7. Building Diagram Number B					
A8. For a building with a crawlspace or enclosure(s):			A9. For a building with an attached garage:		
a) Square footage of crawlspace or enclosure(s)	550 sq ft		a) Square footage of attached garage	_____ sq ft	
b) No. of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade	4		b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade	_____	
c) Total net area of flood openings in A8.b	512 sq in		c) Total net area of flood openings in A9.b	_____ sq in	
d) Engineered flood openings?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		d) Engineered flood openings?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION					
B1. NFIP Community Name & Community Number Town of Bucoda WA & 530189			B2. County Name THURSTON COUNTY		B3. State WASHINGTON
B4. Map/Panel Number 53067C0486	B5. Suffix E	B6. FIRM Index Date 09/02/1981	B7. FIRM Panel Effective/Revised Date 10/16/2012	B8. Flood Zone(s) AE	B9. Base Flood Elevation(s) (Zone AO, use base flood depth) 255.0'
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in item B9: <input type="checkbox"/> FIS Profile <input checked="" type="checkbox"/> FIRM <input type="checkbox"/> Community Determined <input type="checkbox"/> Other/Source: _____					
B11. Indicate elevation datum used for BFE in item B9: <input type="checkbox"/> NGVD 1929 <input checked="" type="checkbox"/> NAVD 1988 <input type="checkbox"/> Other/Source: _____					
B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Designation Date: <u> </u> / <u> </u> / <u> </u> <input type="checkbox"/> CBRS <input type="checkbox"/> OPA					
SECTION C – BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)					
C1. Building elevations are based on: <input type="checkbox"/> Construction Drawings* <input type="checkbox"/> Building Under Construction* <input checked="" type="checkbox"/> Finished Construction *A new Elevation Certificate will be required when construction of the building is complete.					
C2. Elevations – Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO. Complete items C2.a-h below according to the building diagram specified in item A7. In Puerto Rico only, enter meters. Benchmark Utilized: WSDOT Mon ID 5521/TC: Bucoda & 221 Vertical Datum: NAVD 88					
Indicate elevation datum used for the elevations in items a) through h) below. <input type="checkbox"/> NGVD 1929 <input checked="" type="checkbox"/> NAVD 1988 <input type="checkbox"/> Other/Source: _____ Datum used for building elevations must be the same as that used for the BFE.					
			Check the measurement used.		
a) Top of bottom floor (including basement, crawlspace, or enclosure floor)	251 . 7	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters		
b) Top of the next higher floor	256 . 7	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters		
c) Bottom of the lowest horizontal structural member (V Zones only)	NA . NA	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters		
d) Attached garage (top of slab)	NA . NA	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters		
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	256 . 7	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters		
f) Lowest adjacent (finished) grade next to building (LAG)	251 . 6	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters		
g) Highest adjacent (finished) grade next to building (HAG)	252 . 1	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters		
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	251 . 6	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters		
03-03-2016					
SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION					
This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.					
<input checked="" type="checkbox"/> Check here if comments are provided on back of form. Were latitude and longitude in Section A provided by a licensed land surveyor? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
<input checked="" type="checkbox"/> Check here if attachments.					
Certifier's Name Dennis R. Baker		License Number 35972			
Title Professional Land Surveyor		Company Name LeRoy Surveyors & Engineers, Inc.			
Address P.O. Box 740		City Puyallup	State WA	ZIP Code 98371	
Signature <i>Dennis R. Baker</i>		Date 03/03/2016	Telephone (360) 507-1166		
					
FEMA Form 086-0-33 (7/12)			See reverse side for continuation.		Replaces all previous editions.

National Flood Insurance Program Elevation Certificate and Instructions

The National Flood Insurance Program (NFIP) Elevation Certificate (EC) (FEMA form 086-0-33) is an administrative tool of the NFIP which is to be used to provide elevation information necessary to ensure compliance with community floodplain management ordinances, to determine the proper insurance premium rate, or support a request for a Letter of Map Amendment (LOMA) or a Letter of Map Amendment based on fill (LOMR-F).

This document is referenced in the NFIP [Flood Insurance Manual](#) (Special Certifications Section). This form is fillable and can be completed in either Adobe Acrobat Pro or Adobe Reader and saved.

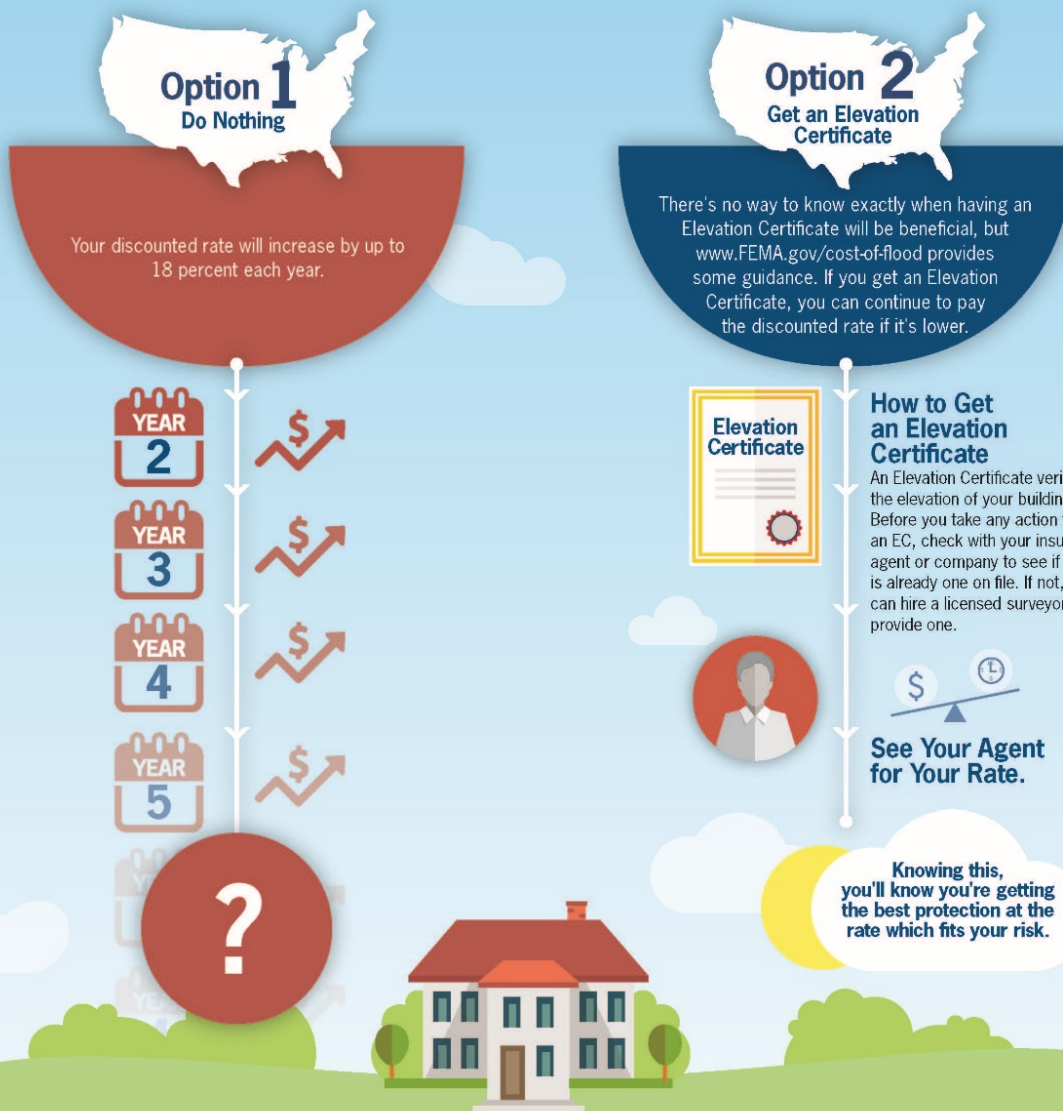
Note: Completing Section B of the Elevation Certificate (item B12) requires up-to-date information on Coastal Barrier Resources System (CBRS) boundaries and prohibition dates. Those shown on Flood Insurance Rate Maps are for information purposes only. For the most current and best available CBRS maps and boundary data, please go to the U.S. Fish and Wildlife Service (FWS) [CBRS Mapper](#). The FWS website also provides additional information regarding CBRA [property determinations](#).

	Size	Publication Date
 Elevation Certificate and Instructions	3.82M	March 1, 2018
 Elevation Certificate Form Only	2.91M	March 1, 2018

What Will Your Flood Risk Cost?

Get the Lowest Rate You Can Qualify For.

Your situation (LETTER D): Your property is at high risk for flooding. You can expect your discounted rate to increase by at least 5 percent, and up to 18 percent, each year. Until you get an Elevation Certificate, there's no way to predict when the 5 to 18 percent yearly increases will stop. Keep in mind, all rates are subject to change from year to year because of adjustments like inflation. Know your options.



Keep Your Policy in Force.

If you ever allow your flood insurance policy to lapse for either more than 90 days, or twice for any number of days, you may be required to provide an Elevation Certificate, and you may no longer be eligible for the discounted rate you have been receiving.

Contact your agent for more information or visit www.FEMA.gov/cost-of-flood.



FEMA



Attachment D

People Are Leaving National Flood Insurance Program (if they can)

Flood insurance premiums have been increasing faster than usual. One result of escalating premiums has been a large number of Basin policy holders dropping their flood insurance coverage. (French Wetmore)

Flood Insurance Policies in Force			
Community	May 2014	March 2018	Difference
Aberdeen	905	543	- 40%
Bucoda	66	47	- 29%
Centralia	910	727	- 20%
Chehalis	252	233	- 8%
Cosmopolis	15	11	- 27%
Grays Harbor County	545	422	- 23%
Hoquiam	1,146	663	- 42%
Lewis County	1,233	997	- 19%
Montesano	3	6	+ 100%
Napavine	0	1	N/A
Oakville	10	6	- 40%
Pe Ell	6	4	- 33%
Thurston County	802	696	- 13%
Total	5,893	4,356	- 26%
<p><i>County data are for the entire unincorporated areas of the counties, not just the part in the Basin. Napavine was not in the NFIP until 5/19/2017.</i></p>			

Attachment E
Flood Insurance Rate Example (French Wetmore)

Elevation Rated – October 2017 Flood Insurance Manual																
Single family house, one floor, slab on grade foundation																
Building coverage:		\$100,000			CRS Class: 6											
Additional coverage:		\$400	First \$60K:		\$600											
Deductible factor:		1.000														
Zone	Height	Rate	First \$60,000 Cost	Deduct.	Additional Coverage Rate	Additional Coverage Cost	Deduct.	ICC Premium	Sub Total	CRS Discount	Sub Total	Reserve Fund	HFIAA Surcharge	Federal Policy Fee	Total Premium	
page Rate 2																
AE	Pre-FIRM	\$0.99	\$594.00	1.000	\$0.90	\$360.00	1.000	\$70.00	\$1,024.00	20%	\$819.20	\$122.88	\$25.00	\$50.00	\$1,017	
AE	With basement	\$1.05	\$630.00	1.000	\$1.33	\$532.00	1.000	\$70.00	\$1,232.00	20%	\$985.60	\$147.84	\$50.00	\$50.00	\$1,233	
page Rate 7																
AE	3 feet > BFE	\$0.32	\$192.00	1.000	\$0.08	\$32.00	1.000	\$5.00	\$229.00	20%	\$183.20	\$27.48	\$25.00	\$50.00	\$286	
AE	2 feet > BFE	\$0.47	\$282.00	1.000	\$0.09	\$36.00	1.000	\$5.00	\$323.00	20%	\$258.40	\$38.76	\$25.00	\$50.00	\$372	
AE	1 foot > BFE	\$0.87	\$522.00	1.000	\$0.13	\$52.00	1.000	\$5.00	\$579.00	20%	\$463.20	\$69.48	\$25.00	\$50.00	\$608	
AE	At BFE	\$2.02	\$1,212.00	1.000	\$0.20	\$80.00	1.000	\$5.00	\$1,297.00	20%	\$1,037.60	\$155.64	\$25.00	\$50.00	\$1,268	
AE	1 foot < BFE	\$5.26	\$3,156.00	1.000	\$0.25	\$100.00	1.000	\$5.00	\$3,261.00	20%	\$2,608.80	\$391.32	\$25.00	\$50.00	\$3,075	
AE	2 feet < BFE	\$7.51	\$4,506.00	1.000	\$0.52	\$208.00	1.000	\$34.00	\$4,748.00	20%	\$3,798.40	\$569.76	\$25.00	\$50.00	\$4,443	
AE	3 feet < BFE	\$9.25	\$5,550.00	1.000	\$0.91	\$364.00	1.000	\$34.00	\$5,948.00	20%	\$4,758.40	\$713.76	\$25.00	\$50.00	\$5,547	
page Rate 2																
X	N/A	\$1.06	\$636.00	1.000	\$0.29	\$116.00	1.000	\$5.00	\$757.00	10%	\$681.30	\$102.20	\$25.00	\$50.00	\$858	
X	With basement	\$1.19	\$714.00	1.000	\$0.41	\$164.00	1.000	\$5.00	\$883.00	10%	\$794.70	\$119.21	\$25.00	\$50.00	\$989	
Rate increases		Year	Premium @ 18% increase													
		1	\$1,017													
		2	\$1,200													
		3	\$1,416													
		4	\$1,671													
		5	\$1,972													
		6	\$2,327													
		7	\$2,746													
		8	\$3,240													
		9	\$3,823													
		10	\$4,511													
		11	\$5,323													
		12	\$6,281													
		13	\$7,412													
		14	\$8,746													

Attachment F
Proposed Pilot (next pages)

Chehalis River Basin Flood Authority

Centralia Area Pilot Project

Helping Property Owners with Flood Insurance and Flood Protection

Objective: To advise property owners on options to reduce their flood insurance premiums and better protect their buildings from flood damage.

Approach: The project team will work with local insurance agents to:

- a. Explain flood insurance premium rating to residents and businesses, including why premiums are increasing and how elevation rating works.
- b. Meet one-on-one with property owners interested in learning more, review their situation, and discuss measures that could potentially lower premiums.
- c. Explore ways to help fund on-site flood protection measures that could result in lower premiums.

Phase 1 is to develop a scope of work for Phase 2 outreach and technical assistance. There may be a Phase 3 with financial assistance.

Project Team:

French Wetmore, French & Associates, Steilacoom, 253/753-6811

Scott Boettcher, SGBH Partners, Olympia, 360/480-6600

Emil Pierson, Director, Community Development, Centralia, 360/330-7662

Hillary Hoke, Planner, Community Development, Centralia, 360/330-7684

Doyle Sanford, Director, Community Development, Lewis County, 360/740-1146

Phase 1 Tasks:

1. Scoping Meeting: On March 15, the Pilot Project Team will meet with representatives of interested insurance agencies and other invited participants to develop a scope of work. At the meeting, the project team will outline the concept of:
 - a. Hosting a public meeting for residents of the pilot area. The meeting would have presentations by Project Team members on flood insurance and flood protection measures. It is hoped that local insurance agencies will have representatives to talk to their clients who attend.
 - b. Assisting policy holders with approximate elevation data (developed for a different Flood Authority project) that can show when it would be beneficial to change their policies from the subsidized rates to elevation rating.

- c. Explaining flood protection alternatives to policy holders. These would include filling in a basement, installing openings in foundation walls, elevating the building or the utilities, etc. The explanations would include the impact of the alternatives on flood insurance premiums.
 - d. Assisting policy holders in obtaining FEMA Elevation Certificates needed for accurate flood insurance rating.
2. **Scope of work:** A more detailed approach and scope for Phase 2 will be developed after the meeting and circulated for comment.

Phase 2 Tasks:

The following is tentative, subject to preparation and Flood Authority approval of the scope of work.

1. **Outreach:** The Project Team will publicize the project. The detailed scope will be more specific, but it is expected that there will be a general message sent to the pilot area that explains the project and invites people to a neighborhood meeting.

At the meeting, Project Team members will explain how flood insurance premiums are determined, when an Elevation Certificate is needed, what data the Team has that can help estimate premiums under different scenarios, examples of property protection measures that can impact premiums, and the offer of more direct assistance.

2. **Technical Assistance:** Project Team members will meet with property owners who would like to know more. Discussions on insurance can be done after the neighborhood meeting or over the telephone. Discussions on property protection would be conducted at the property. After each contact, the property owner will be given recommendations on what to do next, including permit requirements and a list of licensed contractors.
3. **Financial Assistance:** Project Team members will collect information on the buildings they visit and will develop a list of the types and numbers of recommended property protection measures. Cost estimates will be developed for the more common measures.

Lower flood insurance premiums are expected to be the primary financial incentive for installing a property protection measure. Project Team members can use the estimated costs and alternative premiums to provide an approximate return on investment.

Alternative financial assistance arrangements will be explored. These could include 100% grants, cost-shared grants, loans, rebates, and paying for Elevation Certificate surveying. At some point, the Project Team will recommend whether a financial assistance program (Phase 3) should be initiated and, if so, how it could work.