



Wai Halana

Hawaii Flood News

The Cost of Remodeling Your Home Could Be “SUBSTANTIAL”



Whether you are planning on building a brand new home or remodeling an existing home, one of the first things you should determine about your property is the flood hazard risk zone based on FEMA’s Flood Insurance Rate Map. Knowing this information is not just to determine if mandatory flood insurance requirements apply, but it will also determine whether the development and/or improvements will trigger compliance with local floodplain management regulations.

New construction within a high risk flood zone (A and V zones) must be built in accordance with local floodplain management ordinances. The most common requirement is ensuring the structure is elevated at or above the Base Flood Elevation (BFE). However, not only new construction is subject to compliance with these regulations. Prop-

erty owners planning on remodeling an existing structure may also be faced with having to comply with modern codes if their improvements are considered a “Substantial Improvement” by local county officials.

Substantial Improvements is a term FEMA defines as:

Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:

- *Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or*

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The current and selected past issues are also available at:

www.hawaiiinfip.org

We welcome your comments and suggestions, as well as, newsworthy articles. Your submissions may be sent to the Department of Land and Natural Resources, Engineering Division, P.O. Box 373, Honolulu, Hawaii 96809.

If you'd like to receive the Wai Halana via email or wish to be removed from our mailing list, contact Jerome Acadimia at (808) 587-0254.

Upcoming Events

Substantial Improvement / Substantial Damage Workshop

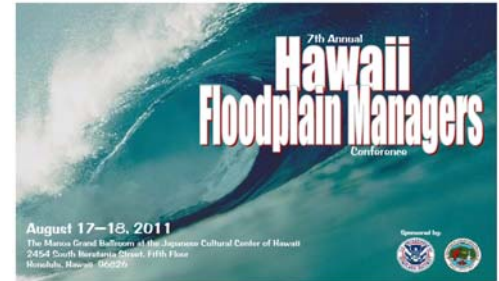


August 2011 - FREE workshop being offered to Engineers, Architects, Planners, and Community Officials

For more information on this valuable workshop, read article entitled "The Cost of Remodeling Your Home Could Be SUBSTANTIAL". Seating is limited so don't delay and register today !!!

Attention:

**Hawaii Engineers and Architects
Doing work in FEMA Floodplains ?**



You might want to consider attending the 7th Annual Hawaii Floodplain Managers Conference this fall.



\$50.00 Registration Fee

When:

August 17 - 18, 2011

Where:

Manoa Grand Ballroom
Japanese Cultural Center of Hawaii

For more information on the conference and the topics that will be discussed, please call conference chair, Kristen Akamine at (808) 587-0281.

Meet Hawaii's Newest Certified Floodplain Manager



Kauai native, Ms. Maile Aiu has joined the ranks of 24 other Certified Floodplain Managers (CFM) in the State of Hawaii by recently passing her CFM exam this past April. Maile is an engineer with the County of Kauai and works in the floodplain management program along side Kauai's Floodplain Manager, Ms. Wynne Ushigome.

Prior to moving back to Kauai, she spent seven years in California attending college and working. She graduated with a bachelor's degree in civil engineering from Loyola Marymount University and earned a master's degree in structural engineering from the University of California, San Diego.

While in San Diego, Maile worked as a Staff Engineer for Mactec Engineering & Consulting where she gained experience in materials testing and nondestructive evaluation.

Although she enjoyed her time in the mainland, Maile is very grateful to be back home on Kauai and working for the County.

Congratulations Maile !!!



Hawaii County: Hawaii's Newest CRS Community



The National Flood Insurance Program's (NFIP) Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS:

- Reduce flood losses;
- Facilitate accurate insurance rating; and
- Promote the awareness of flood insurance

On May 1, 2011, Hawaii County became the second county in the State to achieve the status of being a CRS participant. Previously Maui County, who joined the program in 1995, was the only CRS community in the State of Hawaii. Both Maui County and Hawaii County are Class 8 communities which means that they qualify for a 10 percent discount in premiums on new or renewed NFIP flood insurance policies in a high risk flood zones.

To learn more about what about the CRS program, visit: <http://www.fema.gov/business/nfip/crs.shtm>



Flood Insurance Committee Corner

FLOOD IN PROGRESS

The big news in the past month or two has been around the flooding that is occurring across the nation. From the mighty Mississippi, to the swollen Missouri River to even New England and Lake Champlain! While warnings of high snow pack and the potential for flooding were given early by many local, state and federal government agencies, unfortunately many citizens maintained their sandbag (or head in the sand) mentality. And as we have seen, it has not worked in many places as levees have breached, overtopped and even been blown open . . . and dams are releasing enormous amounts of water causing flooding down river.

These flooding events have unleashed a tsunami of news stories about local residents going to their local lender to quickly get a small loan to avoid the 30-day waiting period. While the lending regulators will need to address any potential compliance issues (if any) with the loan itself, FEMA has provided guidance regarding the timing of when coverage was in effect versus when the "flood" started. The exclusion in the policy (Section V [B]) states that the NFIP will not insure a loss directly or indirectly caused by a flood that is already in progress at the time and date that the policy term begins or coverage added. In an attempt to further explain the exclusion, FEMA released a Bulletin (during the week of the ASFPM conference) to help address the timing of flooding associated with, for example the blowing of the levee in Missouri and the opening of the spillway in Louisiana. While some clarification was provided, initial feedback was that additional questions still needed to be answered. To provide further clarification related to the more recent release of additional water from the Garrison Dam (ND) along the Missouri River, FEMA issued a second Bulletin that identifies when the flooding event began. These two Bulletins are on the Insurance Committee page and if you have not read these two Bulletins, we recommend that you familiarize yourself with them, even if your area is not currently flooding . . . because someday it will!



—Your Humble Insurance Committee Co-Chairs
Gary Heinrichs & Bruce Bender

This column is produced by the ASFPM Insurance Committee. Send your questions about flood insurance issues to InsuranceCorner@floods.org and they will be addressed in future issues of the newsletter.

- *Any alterations of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure."*



Work on buildings ranges from routine maintenance and minor repairs (which may not require permits), rehabilitation plans that are interior in nature like a kitchen remodel, to more extensive renovations that alter the exterior dimensions and/or adds a second floor.

Local building officials will review the proposed work and make a determination on whether the improvement cost equals or exceeds 50% of the market value of the structure before the start of the improvements. If a project is deemed a Substantial Improvement by the local building official, the property owner will be required to bring the existing building into compliance with today's floodplain management regulations as a condition of the issuance of the building permit.

For Hawaii, each county's floodplain management regulations meet the minimum National Flood Insurance Program (NFIP) regulations found in Title 44 of the Code of Federal Regulations, § 60.3. However, for Maui, Kauai, and the Big Island, their floodplain management regulations exceed the minimum standards and are more restrictive. It is important to understand the nuances in each county.

One of these higher standards that were adopted by the three counties, was a "cumulative substantial improvement" requirement. This requirement attempts to bring non-conforming buildings into compliance with flood damage-resistant standards sooner than if the community administers the minimum NFIP requirement, which applies to each separate application for improvements and repairs.



For many older homes that were built prior to the existence of floodplain management regulations (aka pre-FIRM structures), they have been subject to repetitive flood damage. One way that communities can achieve long-term reduction of flood losses and/or to bring non-conforming structure into compliance with present day regulations are to adopt a requirement that all improvements and repairs are cumulatively tracked over time and counted towards the Substantial Improvement (SI) or Substantial Damage (SD) determination. Another reason some communities take this cumulative approach is to capture "phased improvements".

The term "phased improvement" refers to a single improvement that is broken into parts. For a number of reasons, owners may wish to schedule anticipated improvements over a period of time, and they may request separate permits for each phase. Local building officials, while reviewing building permit applications, will evaluate the scope of the project to ensure that phased improvements do not circumvent the substantial improvement requirements.

The local building official will also need to review all work proposed for "rehabilitation" or "remodeling" to determine whether it constitutes a substantial improvement. The NFIP considers "rehabilitation" and "remodeling" to include improvements to a building that do not affect the external dimensions nor expand the total area of the building. "Rehabilitation" may or may not involve structural modification of the building. If after the local building officials review the proposed work and is determined to be a substantial improvement, the existing building must be brought into compliance. This will often mean that an existing building will have to be elevated at or above the Base Flood Elevations (BFE) based on the current effective Flood Insurance Rate Maps (FIRM).

What if new flood maps are issued, but the structure was built in compliance with the flood maps at the time of construction, what does that mean for the property owners?

In many communities, flood hazard maps have been revised to reflect new floodplain studies, better flood data, improved topographic data, new encroachments and bridges, and for other reasons. In recent years, Hawaii has experienced several maps changes to our FIRMs.

When flood hazard maps are revised, either the high hazard flood areas expand in area and the BFEs increase, or the high hazard areas reduce in area and the BFEs decrease. Map revisions may reflect changes in community boundaries, zone designation, new floodway delineations, or changes in floodway boundaries. Also, A zones without BFEs may be studied and shown with BFEs, or waterways that were previously unmapped may be shown with high risk flood areas. These changes could have an affect on future renovation projects to your home.

To learn more about Substantial Improvements and how it could affect your project, please take advantage of a unique training opportunity coming this August. To sign up for this FREE workshop, please visit: http://www.hidlnr.org/eng/nfip/pdf/training/SISD_registration.pdf. For more information please contact Jerome Acadimia at (808) 587-0254 or Kristen Akamine at (808) 587-0281.



Flooded Washes: To Cross or Not to Cross?

By La Monica Everett-Haynes, University Communications, March 1, 2011

UA graduate student Ashley R. Coles sought to understand reasons why people choose to cross flooded washes, finding that most people in her study who crossed had made a calculated, rational decision.



Many of us have been there: Do I risk crossing this flooded roadway in my seemingly sprightly family sedan? That guy in front of me just made it. But what are the psychological reasons why certain people take the chance at crossing, risking personal injury, vehicular damage or death? Ashley R. Coles conducted an investigation to find out. It turns out that, for most people, it comes down to a calculated negotiation.

Coles, a University of Arizona doctoral student studying geography, surveyed more than 170 people in Tucson as part of her study, "Driving into Danger: Perception and Communication of Flash Flood Risk from a Cultural Perspective."

"It seems like an obvious thing you wouldn't do, so why do so many people do it? The assumption is that people have a misconception about the risk," said Coles.

Coles said the conundrum is that people will choose to cross despite ample warnings in public service announcements, news accounts and signage warning against driving through flooded roadways and washes. In fact, the behavior of some motorists resulted in what is commonly termed the Stupid Motorist Law in Arizona. Individuals who must be rescued from floodwaters after having crossed a barricade are financially liable for some emergency response expenses.

"The Stupid Motorist Law, which is designed to be a deterrent, is not the major deterrent at all," Coles said, adding that some also will cross despite the risk of injury or death.

The U.S. Natural Hazard Statistics reported in 2009 that 53 people died in flash and river floods with 57 percent of them having been caught in a vehicle. The agency also reported that, overall and consistently, nearly half of all flash-flood deaths involve a vehicle.

Coles also found that people tend to have a high level of trust in signage and barricades at flooded roadways. "About 90 percent agree that the signs indicate the possibility of a flood occurring in that location," Coles said, adding however that "the signs do not reveal whether the situation is currently dangerous."

And she found some interesting variation when she considered a range of social and cultural factors such as individual trust, self-efficacy and perceptions about time. "Cultural factors influence perceptions, which then influence behaviors," Coles said. "That behavior is going to become information for other people, and for yourself."

Coles said signage and expert messages were not the only sources of information, but that people tended to rely on a range of sources to make a decision about whether or not to cross.

People said they tended to cross if it appeared that weather conditions were getting worse, if they could not find another route and if they saw that vehicles had successfully crossed. Those who chose not to cross did so because

Flood Insurance Rate Maps *Updates*

Are you currently doing work in the Counties listed here? If so, please take note that FEMA has approved the following Letter of Map Changes to the flood hazard information shown on the effective Flood Insurance Rate Maps.

Maui County

Type: LOMA
FIRM Panel 0588E
Effective Date of the Revision: March 8, 2011
FEMA Case Number: 11-09-0663A
Flooding Source: Sheet Flow

On-line readers can view LOMC [here](#)

Type: LOMR-F
FIRM Panel 0586E
Effective Date of the Revision: March 24, 2011
FEMA Case Number: 11-09-1947A
Flooding Source: Pacific Ocean

On-line readers can view LOMC [here](#)

City and County of Honolulu

Type: LOMR
FIRM Panel 0085F
Effective Date of the Revision: March 21, 2011
FEMA Case Number: 11-09-0171P
Flooding Source: Makaleha Stream - from the confluence with the Pacific Ocean to just downstream of Cane Haul Road

On-line readers can view LOMC [here](#)

Type: LOMA
FIRM Panel 0387G
Effective Date of the Revision: March 29, 2011
FEMA Case Number: 11-09-1587A
Flooding Source: Kuapa Pond

On-line readers can view LOMC [here](#)

Type: LOMA
FIRM Panel 0391G
Effective Date of the Revision: April 28, 2011
FEMA Case Number: 11-09-2517A
Flooding Source: Kuapa Pond; Pacific Ocean

On-line readers can view LOMC [here](#)

Maps Will Acknowledge Levees Below 100 Year Protection

FLOOD INSURANCE: FEMA to give some credit for subpar levees when assessing risk

Paul Quinlan, E&E reporter



Under pressure from Congress, the Federal Emergency Management Agency is moving fast to change its practice of ignoring the existence of a levee considered to be substandard when assessing a home-

owner's flood risk. Dubbed the "without levee" practice, it has sometimes resulted in big flood insurance rate increases for homeowners across the United States who were found to be living behind one of the nation's hundreds of aging levees recently deemed to be substandard, or incapable of protecting against a 1-in-100-year flood.

That could soon change. FEMA Administrator Craig Fugate told lawmakers on 6/9/2011 that an in-the-works policy, due out in draft form in 60 to 90 days, would require his agency to take all levees into account when assessing flood risk, regardless of whether the structure is certified, and consider its flood protection value "as built." "We will now, after this process, look at structures that are there and then map what this risk looks like," Fugate told the Senate Banking, Housing and Urban Affairs Committee. The change could mean savings for many homeowners who recently found themselves living in low-lying areas FEMA deemed at-risk of flooding. FEMA has been working to redraw flood maps across the United States to better account for flood risk, as part of a broader effort to reform the nation's deeply indebted National Flood Insurance Program.

Before, if it wasn't up to the 1-in-100-year standard, the levee did not exist on FEMA's new maps. Now even substandard levees could be given some benefit of the doubt. That could go far in alleviating pressure on communities that cannot afford to upgrade a levee found to be below-standard or pay to have their levee certified. Lawmakers – 49 House members and 29 senators – petitioned Fugate to make such a change in a letter earlier this year. Committee members praised him for moving forward quickly on changing the practice. "Thank you for that policy change," said Louisiana Sen. David Vitter (R). "That's enormously important."

Source: ASFPM News and Views



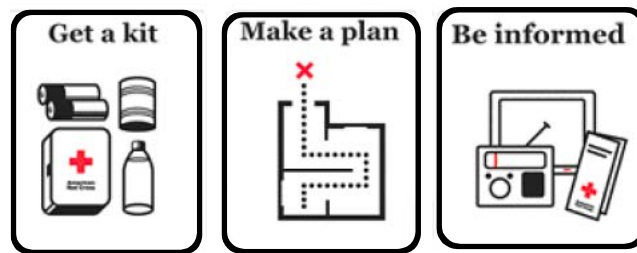
Preparing for Hurricane Season

Individual and Family Preparedness

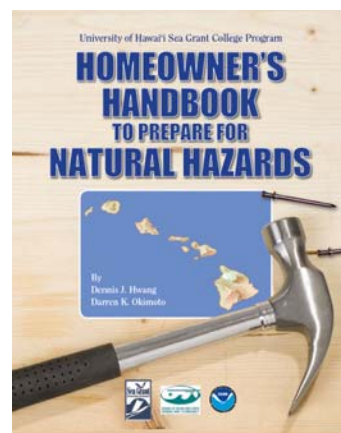
In Hawaii due to our isolation, we encourage all families to be prepared for 5-7 days instead of 72 hours. In the midst of rushing through everyday life, it's important to take a minute or two to prepare for emergencies. Being prepared helps you and your family minimize the impact of a disaster such as a hurricane or an emergency such as a broken leg.

The best way to make your family and your home safer is to be prepared **before** disaster strikes.

Local officials and relief workers will be on the scene after a disaster, but they cannot reach everyone right away. The best way to make you and your family safer is to be prepared before disaster strikes. We encourage you to:



1. **MAKE A PLAN:** Planning ahead is the first step to a calmer and more assured disaster response. Make a [Family Communications Plan](#) that includes an evacuation plan and coordinates with your school, work and community communication plans. Practice this plan with your entire family.
2. **GET A KIT:** Store enough supplies for everyone in your household for at least 5-7 days. Include any necessary items for infants, seniors and people with disabilities. Store your disaster supplies in a sturdy but easy-to-carry container. Keep a smaller version of the kit in your vehicle. Remember to check your kit every six months. Please refer to our list of [Disaster Supplies Kit](#) recommendations.
3. **BE INFORMED AND GET TRAINED.** Learning basic preparedness, First Aid, and CPR/AED skills can give you the confidence and ability to help anyone in your family, community and at work in the event of an emergency.
4. **EVALUATE YOUR PLAN.** Take the [Readiness Quotient Test](#) and see how prepared you are.
5. **ADDITIONAL RESOURCES.** [Homeowner's Handbook to Prepare for Natural Hazards FEMA](#)



For more information, visit Hawaii Chapter of the American Red Cross at: <http://www.hawaiiiredcross.org/getprepared/prepare.html>



*Make Hawaii a Great
Place to Live !*

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they had children or other family members in the vehicle, they felt it was too dangerous or were worried that crossing might damage their vehicle.

"It's not that people don't trust the signs or the information, it's just that the signs are ambiguous," she said. "So people feel they have to use some other information to decide whether it is dangerous or not right now." Coles noted that 78 percent of respondents said they relied on the advice of family, friends, neighbors and others about whether to cross, sometimes even making the call at the flooded roadway or wash to inquire. "People are making the decision to cross based on a huge assortment of information, not just a sign," she said.

Yet Coles found that flood risk managers and others often believe that individuals who choose to cross are being irrational, overconfident, "stupid" drivers. "A lot of my findings contradict some of the major thinking of people, especially that they are being impulsive or that they don't know any better or that they are overconfident," Coles said. "The main reason why this is important is because it challenges the belief that people drive through because they are being irrational," she said. Consequently, greater lessons must be learned. Of note, Coles said the use of roadways as channels for floodwaters can be a risky practice. "We have hundreds of low-water crossings in town," she said. "The flood risk managers are saying, 'Why are people driving through flooded streets?' and people are asking, 'Why is there water in our streets? This is where we drive.'" But the real problem, she said, is "that the best approach is not to drive at all when it is raining." Family or other responsibilities can make the decision not to drive a difficult one, she also noted.

"Education is important but limited in its ability to prevent risk-taking behavior," Coles said. "As shown by this research, people already know that they should not drive through flooded streets," she added. "What has not been considered is the possibility that the decision to do so is not always irrational." In addition to drivers, flood risk managers also have much to learn, she said. "Understanding how culture influences risk perception and behavior is critical for effective risk management and communication."

To read the full article, visit: <http://uanews.org/node/37950>

