

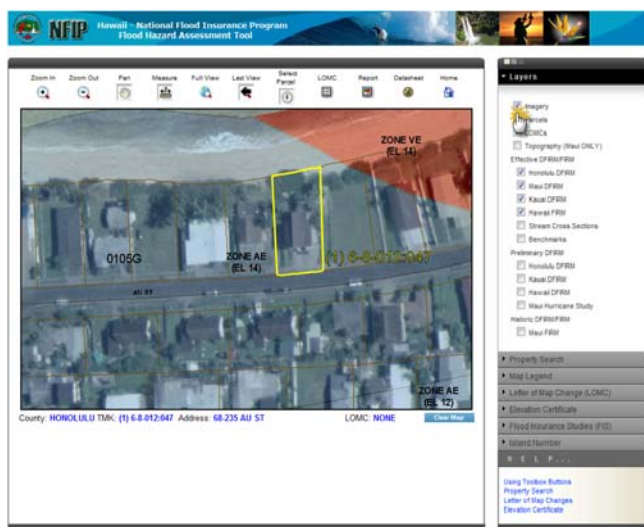


Wai Halana

Hawaii Flood News

Filling out an Elevation Certificate Just Got Easier

Paper Flood Insurance Rate Maps (FIRM) are soon going to be a thing of the past for Hawaii communities participating in the National Flood Insurance Program. FEMA's new Digital Flood Insurance Rate Maps, a.k.a. DFIRMs, have revolutionized the way map users can utilize the data and more accurately assess their flood risk. The Department of Land and Natural Resources (DLNR) has capitalized on the digital product by developing a GIS-based application that allows users to search for specific properties and flood hazards. The Hawaii Flood Hazard Assessment Tool (FHAT) was launched in January 2008 and has become a valuable resource for many NFIP stakeholders. Since then DLNR has enhanced the FHAT by adding the capability of viewing Letter of Map Changes, preliminary DFIRMs, and NGS benchmark datasheets. The latest improvement that has been incorporated into the FHAT is an Elevation Certificate (EC) tool that allows users to initiate an EC for a property by automatically inputting various form fields with data extracted from a search query. The remainder of the PDF form can then be completed by the user, saved, and submitted for processing.

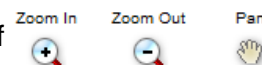


The EC tool is simple to use and will improve the accuracy of FIRM panel information that is required to be provided on the form and ensure that the current FEMA EC form is being utilized.

Before initiating the EC application, users should locate a property of interest using the PROPERTY SEARCH functionality on the FHAT. Next, open the LAYERS menu and toggle on the "IMAGERY".

Users should use the zoom and pan tools above the map viewer to resize and reposition the map so that the center front of the structure of interest is clearly visible.

located



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Wai Halana is published quarterly by the Department of Land and Natural Resources (DLNR), Engineering Division. It is supported by the Federal Emergency Management Agency under the Community Assistance Program. The contents of this publication is to increase awareness about the National Flood Insurance Program. The authors and publisher are solely responsible for the accuracy, and do not necessarily reflect the views of DLNR or FEMA.

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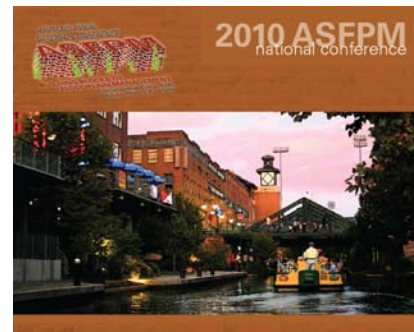
The current and selected past issues are also available at:

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 Wai Halana via email or wish to be removed from our mailing list, contact Jerome Acadimia at (808) 587-0254.

Upcoming Events



34th Annual Association of Floodplain Manager's Conference
Cox Convention Center
Oklahoma City, Oklahoma
May 16 - 21, 2010

For more info visit: www.floods.org



Floodplain Management Association's Annual Conference

*When the Shoe Doesn't Fit...
Adapting to New Regulations*

Loews Resort
Henderson, Nevada
November 2-5, 2010

For more info visit:
<http://www.floodplain.org/conference.php>

Upcoming Changes to the Flood Insurance Program

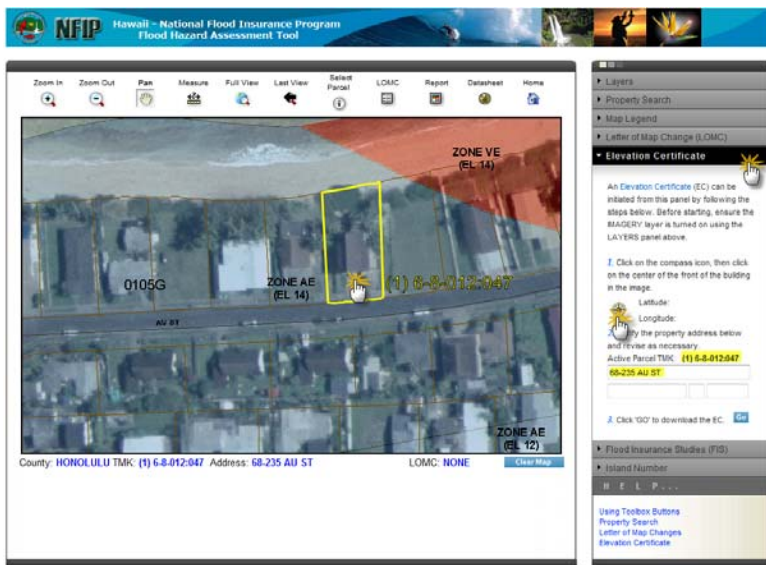
May 1, 2010 Changes

The Federal Policy Fee (FPF) is going up to \$40 (\$20 for Preferred Risk Policies, PRPs) but some rates are coming down to balance the overall increase to stay under the 10% maximum annual increase that is allowed. Note that PRP rates are changing too, except for the first level of coverage (i.e., the \$119 for \$20,000 building / \$8,000 contents for residential is NOT changing). The FPF increase is to fund Program administrative costs, per FEMA. Also, an updated Lowest Flood Guide with better pictures (no stick diagrams) will come out. Some condo issues will be clarified and of course the CRS listing will be updated.

October 1, 2010 Proposed Changes:

These changes have not been released as of yet, but per FEMA, they will be out by April 1. There will be rate increases, but not as high as last years, though a few classes will see a 10% increase. The Increased Cost of Compliance (ICC) premium may actually be reduced. The PRP rates may also increase (probably \$10 per each level of limits) as FEMA is looking into the possibility of adding an additional year eligibility to continue with a PRP after a map change before having to rewrite it as a standard-rated X zone policy.





To launch the EC tool, click onto the **ELEVATION CERTIFICATE** menu tab in menu pane located to the right of the map viewer. If a property search was successful, then the property TMK number and street address will be displayed in this pane.

The first step is to click on the compass tool and then click on the center of the front of the structure. Upon selection of this point location, the application will provide the corresponding LAT/LONG and will complete the property address fields with the City, State, and Zip Code. If an incorrect location was selected, the user can click on the compass tool again and reselect a point.

Elevation Certificate

An Elevation Certificate (EC) can be initiated from this panel by following the steps below. Before starting, ensure the IMAGERY layer is turned on using the LAYERS panel above.

- Click on the compass icon, then click on the center of the front of the building in the image.

Latitude: **21.58266**
Longitude: **-158.14168**
- Verify the property address below and revise as necessary.
Active Parcel TMK: **(1) 6-8-012-047**
68-235 AU ST
WAIALUA HI 96791
- Click 'GO' to download the EC. **Go**

The final step is to click on the GO button to download a PDF version of the Elevation Certificate form.

The downloaded form should have the following fields completed:

- A2. Building Street Address, City, State, and Zip Code
- A3. Property Description (TMK #)
- A5. Latitude / Longitude
- B1. NFIP Community Name & Community Number
- B2. County Name
- B3. State
- B4. Map / Panel Number
- B5. Suffix
- B6. FIRM Index Date
- B7. FIRM Panel Effective / Revised Date

All the remaining fields can be filled in by the user and the automatically populated fields can be edited if necessary. Note that the Flood Zone(s) [Item B8] and Base Flood Elevation(s) [Item B9] data is not automatically provided. The user should evaluate the location of the structure relative to the flood hazard using the FHAT. The flood hazard determination would be manually entered on the form in Items B8 and B9.

ELEVATION CERTIFICATE

U.S. DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency
National Flood Insurance Program

Important: Read the instructions on pages 1-9.

SECTION A - PROPERTY INFORMATION

A1. Building Owner's Name _____

A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.
City: **WAIALUA** State: **HI** Zip Code: **96791**

A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)
(1) 6-8-012-047

A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) _____

A5. Latitude/Longitude: Lat. **21.58266** Long. **-158.14168** Horizontal Datum: ☐ NAD 1927 ☒ 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 _____

A8. For a building with a crawlspace or enclosure(s):
a) Square footage of crawlspace or enclosure(s) _____ sq ft
b) No. of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade _____ sq in
c) Total net area of flood openings in A8.b _____ sq in
d) Engineered flood openings? ☐ Yes ☐ No

A9. For a building with an attached garage:
a) Square footage of attached garage _____ sq ft
b) No. of permanent flood openings in the attached garage within 1.0 foot above adjacent grade _____ sq in
c) Total net area of flood openings in A9.b _____ sq in
d) Engineered flood openings? ☐ Yes ☐ No

SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number: **HONOLULU, CITY AND COUNTY OF - 150001**

B2. County Name: **HONOLULU COUNTY**

B3. State: **HAWAII**

B4. Map/Panel Number: **0105**

B5. Suffix: **G**

B6. FIRM Index Date: **JUN 02, 2005**

B7. FIRM Panel Effective/Revised Date: **JUNE 02, 2005**

B8. Flood Zone(s): _____

B9. Base Flood Elevation(s) (Zone A0, use base flood depth): _____

B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9.
☐ FIS Profile ☐ FIRM ☐ Community Determined ☐ Other (Describe) _____

B11. Indicate elevation datum used for BFE in Item B9: ☐ NGVD 1929 ☐ NAVD 1988 ☐ Other (Describe) _____

B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)?
Designation Date: _____ ☐ CBRS ☐ OPA ☐ Yes ☐ No

SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

Another feature that will improve the accuracy of the flood zone determinations is the tool's ability to provide Letter of Map Change (LOMC) information on the EC form. A LOMC is a letter which reflects an official revision to an effective NFIP map. LOMCs are issued in place of the physical revision and republication of the effective map. If a property is within the limits of an effective LOMC, the tool will populate the LOMC case number in Section D of the form. The LOMC is available for downloading to better understand the current flood risk for a particular property or area.



StormSmart Coasts

National Network Home

Vision Statement : The StormSmart Coasts Network is a web resource dedicated to helping decision makers in coastal communities address the challenges of storms, flooding, sea level rise, and climate change. More than just a website, this network of state and local sites gives coastal decision makers a definitive place to find and share the best resilience-related resources available, and provides tools for collaboration.

Town Offers Builders Permit Credit for Freeboard



HULL CONSERVATION DEPARTMENT

253 Atlantic Avenue
Hull, MA 02045

Phone: (781) 925-8102

Fax: (781) 925-8509

The following freeboard* incentive is offered in the interests of protecting the health and safety of Hull citizens, preventing property damage, and reducing the need for costly emergency services during storm events.

"For residential and commercial building elevation, or new construction projects, building department permit fees will be reduced by \$500 (or by the cost of the permit, if lower than \$500) if an elevation certificate is provided to verify the building is elevated a minimum of two feet above the highest federal or state requirement for the flood zone. If the base flood elevation on the FEMA November 2008 draft map is higher than the current map, eligibility for the permit fee reduction will be based on the draft map. When an updated map is officially accepted, eligibility for permit fee reduction will be based on the newly approved map. The Building Commissioner will determine whether a permit application is eligible for this freeboard incentive."

Background:

This proposal stems from the Town's work with the StormSmart Coasts technical assistance grant we received from Massachusetts Coastal Zone Management. The grant focuses on helping cities and towns consider actions or policies that will help prepare for future increases in sea level rise. The relevant points are as follows.

- Neither the current nor the draft FEMA flood maps take in to account any amount of sea level rise. They are predictions based on today's conditions.
- Tide gauge data for Boston shows that sea level rose 10 inches over the past 100 years. We don't have comparable New England figures, but on a global level we know that sea level rose at a rate of .07 inch/year from 1961 to 2003 and .12 inch/yr from 1993 to 2003. That is, the rate of increase in sea level is increasing.
- The latest sea level rise predictions for the next 100 years, from the International Panel on Climate Change (IPCC), range from a low of 7 inches to a high of 23 inches. More recent data indicate that sea level rise is currently on a trajectory that would be at the high end of IPCC estimates. In fact, more recent data suggest that the IPCC estimates are conservative.
- The draft FEMA maps are a result of sophisticated engineering modeling, but we can't be certain that they are 100% accurate. Much attention has been focused on areas where people believe the maps are overly conservative (the flood elevations are too high). However, it must be noted that it is also possible that the maps have underrepresented risk in some areas.
- One of the key predicted impacts of a warming climate is an increase in the frequency and intensity of coastal storms.
- Towns do not have the legal right to require that property owners build at elevations higher than the FEMA maps, or other state regulations require. It is, however, permissible to encourage owners to include freeboard in their projects.

This incentive may be eligible for CRS credit. We wouldn't know until after the next CRS review if we would receive credit, or how much credit we would receive.

*freeboard is the term used when buildings are elevated higher than required by the FEMA flood maps

The town of Hull, Massachusetts has just passed an innovative incentive program to encourage builders to elevate new and renovated structures above predicted floodwaters. **The program offers applicants a \$500 credit to be used towards building department permit fees if the builder elevates the structure at least two feet above the highest federal or state requirement.** For more on the benefits of freeboard, read our article on it here.

This was a creative solution to the challenge of how to encourage safer building without passing new building regulations (in Massachusetts, the state has complete control over building codes). This new incentive, which stemmed from the town's work with the StormSmart Coasts program in the Massachusetts Office of Coastal Zone Management, was passed unanimously by the town's leadership (Board of Selectmen).



Source: StormSmat Coasts (<http://stormsmartcoasts.org/>)

Using Freeboard to Elevate Structures Above Predicted Floodwaters

Freeboard is elevating a building's lowest floor above predicted flood elevations by a small additional height (generally 1-3 feet above National Flood Insurance Program [NFIP] minimum height requirements).



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

Continued on Page 5

Source: StormSmat Coasts (<http://stormsmartcoasts.org/>)

What Are the Benefits of Freeboard?

- Increased protection from floods and storms. Storm waters can and do rise higher than shown on Flood Insurance Rate Maps (FIRMs). Freeboard helps protect buildings from storms larger than those that FIRMs are based on, and provides an added margin of safety to address the flood modeling and mapping uncertainties associated with FIRMs.
- Better preparation for ongoing sea level rise. Since elevations on FIRMs do not include sea level rise, freeboard will help keep structures above floodwaters as storm surge elevations increase.
- Greatly reduced flood insurance premiums. Recognizing that freeboard reduces flood risk, the Federal Emergency Management Agency (FEMA, which administers the NFIP) provides substantial (sometimes more than 50 percent) reductions in flood insurance premiums for structures incorporating freeboard. These savings can rapidly accumulate, especially over the life of a normal mortgage.

Example of Savings on NFIP Premiums* with Freeboard

up to
300
CRS points

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

	V Zone ¹		A Zone ²	
	Annual savings	30-year savings	Annual savings	30-year savings
1' freeboard	\$1,360 (25%)	\$40,800	\$502 (41%)	\$15,060
2' freeboard	\$2,730 (50%)	\$81,900	\$678 (55%)	\$20,340
3' freeboard	\$3,415 (62%)	\$102,450	\$743 (60%)	\$22,290

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

Consider, for example, a proposed one-story building in the V zone¹ that will cost \$250,000 to build at minimum legal standards (the NFIP requires that all homes in the floodplain be elevated to at least the base flood elevation [BFE], mapped on FIRMs). According to the study cited above, adding each foot of freeboard to a home on piles or piers adds about 0.4 percent to total construction costs (about \$1,000 a foot in this example). If the owner takes out a mortgage at 6.5 percent APR for the total construction costs, he or she will have lower monthly payments (mortgage plus NFIP premiums) with 3 feet of freeboard, even though the construction costs are higher.

Home at minimum legal height		Home with 3' of freeboard	
Monthly mortgage payments	\$1,580.17	Monthly mortgage payments	\$1,599.13 (+\$18.96)
Monthly flood insurance	\$458.25	Monthly flood insurance	\$173.67 (-\$284.58)
Total monthly cost	\$2,038.42	Total monthly cost	\$1,772.80 (-\$265.62)

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



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.

City and County of Honolulu

Type: LOMA

FIRM Panel 0290F

Effective Date of the Revision: February 8, 2010

FEMA Case Number: 10-09-1121A

Flooding Source: Kaelepulu Pond

Project ID: Lot 7, Enchanted Lake Estates, Unit 5-C,
[TMK (1) 4-2-049:021]

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

Type: LOMA

FIRM Panel 0030F

Effective Date of the Revision: January 12, 2010

FEMA Case Number: 10-09-0699A

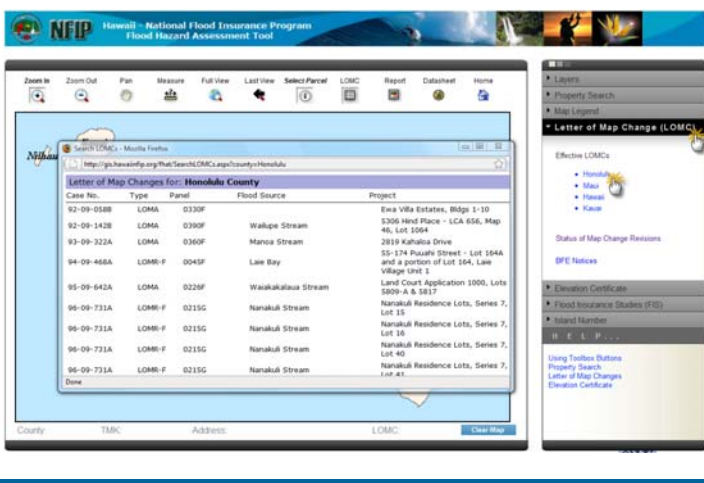
Flooding Source: Pacific Ocean

Project ID: Lot 466, Land Court Application 1095

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

To view all the effective Letter of Map Changes (LOMC) in each county, go to: <http://gis.hawaiiinfip.org/fhat/> to access the Hawaii Flood Hazard Assessment Tool and click on the LETTER OF MAP CHANGE tab and select the county of interest.

To check the status of FEMA map change revisions and/or BFE notices, click on the links in this pane.



LOMC Clearinghouse

FEMA's Customer and Data Services (CDS) has launched the Letters of Map Change (LOMC) Clearinghouse, which will centralize the administrative functions associated with processing MT-EZ, MT-1 and MT-2 requests. Specific activities include creation of LOMC case files, upload and scanning of data, processing of associated fees, and distribution to the appropriate Production and Technical Services (PTS) firm for processing.

As a result, there is a new mailing address. Beginning immediately, requestors should mail their applications and supporting data to:

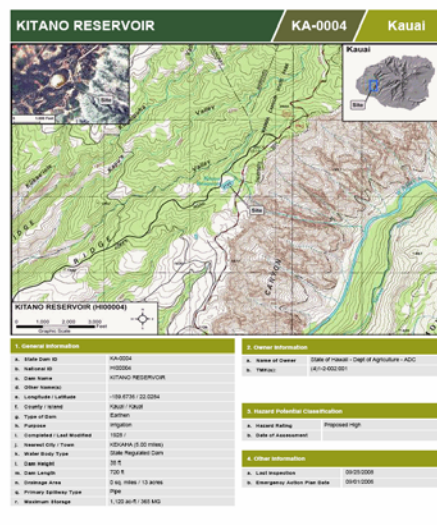
LOMC Clearinghouse
6730 Santa Barbara Court
Elkridge, MD 21075
Attn: LOMC Manager

For more information about the LOMC Clearinghouse, please contact FEMA Map Information eXchange at 1-877-FEMA MAP (1-877-336-2627) or e-mail a Map Specialist.



Hawaii Dam Inventory

To search for information on dams currently regulated by the State of Hawaii, Dam Safety Program, go to: <http://www.hidlnr.org/eng/dam/Inventory.aspx> and select an island and dam of interest. Users will be able to access a dam fact sheet on a particular dam.



Get to know our Staff

For question on the Hawaii Dam Safety Program, contact Edwin Matsuda at (808) 587-0268.

For questions relating to a specific dam, contact the following:

Oahu & Big Island
Jimmy Leung
(808) 587-0238

Kauai & Maui
Denise Manuel
(808) 587-0246

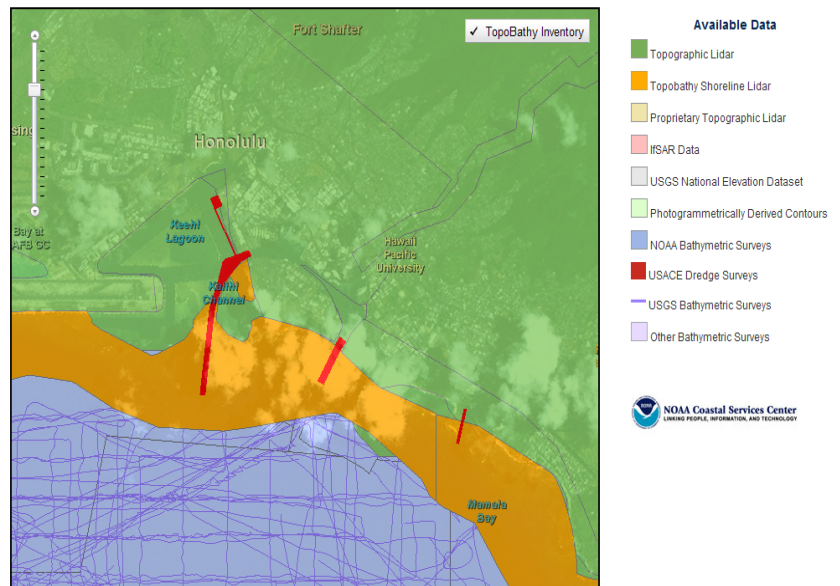




Hawai'i Topographic and Bathymetric Data Inventory

The NOAA Coastal Services Center and Pacific Services Center are pleased to announce the publication of the **Hawai'i Topographic and Bathymetric Data Inventory**. The inventory is focused on the best-available topographic and bathymetric data sets for the Hawaiian Islands and is accessed through an online, interactive viewer that displays the extent of data, helpful information about data quality, and a link to download the data or a point of contact to access the data. This resource will help users address issues such as storm impacts and erosion, identify existing data sets, and strategically target areas for collection to fill data gaps.

Topographic and Bathymetric Data Inventory



The site is at www.csc.noaa.gov/topobathy/viewer/index.html.



FEMA Map Assistance Center (FMAC) Changed to the FEMA Map Information eXchange (FMIX)

On March 1, 2010, the contact center for FEMA's Map Service Center (MSC) was consolidated into the current FEMA Map Assistance Center (FMAC) to provide a one-stop-shop for a variety of information, products, services and tools that support the National Flood Insurance Program (NFIP). To reflect this consolidation, the name of the FMAC changed to the FEMA Map Information eXchange, or FMIX.

Ordering NFIP Products

Customers will still order mapping products from the MSC either online at <http://msc.fema.gov> or via phone. MSC customer service representatives are available to assist with this process and can now be reached by calling the toll-free number for the FMIX, 1-877-FEMA-MAP (1-877-336-2627), option 2, or by e-mailing FEMA-MSCservice@dhs.gov.

General NFIP Information

Map Specialists are still available to answer questions and provide information about the NFIP. They can be reached by calling the toll-free number for the FMIX, 1-877-FEMA-MAP (1-877-336-2627), option 1, or by e-mailing FEMAMapSpecialist@riskmapcds.com.

For additional information related to the consolidation, please visit http://www.fema.gov/plan/prevent/fhm/fmc_main.shtm.





*Make Hawaii a Great
Place to Live !*

Dept. of Land and Natural Resources
Engineering Division
P.O. BOX 373
Honolulu, Hawaii 96809

Board of Land and Natural Resources

Laura H. Thielen, Chairperson
John Morgan
Robert Pacheco
Ron Agor
Jerry Edlao
David Goode
Dr. Samuel M. Gon III

Continued from Page 5

Source: StormSmat Coasts (<http://stormsmartcoasts.org/>)

Who Can Benefit from Freeboard?

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

- Homeowners – Whether or not you live in the house year-round, having it elevated increases the chances that it will weather storms safely, decreasing your worry and protecting your investment. If you're building a new home, or doing a renovation, ask your builder/designer about incorporating freeboard.
- Builders/contractors – Freeboard provides a competitive edge over other builders, allowing you to market the benefits of reduced flood insurance and flood risk to potential buyers. When doing retrofits (especially those requiring bringing structures up to current NFIP standards), explain the benefits of freeboard to your clients.
- Municipalities – When constructing new municipal buildings (schools, fire stations, etc.) use freeboard as a means of saving tax dollars. Encourage all new construction in your community to include freeboard.
- Businesses – Freeboard helps: protect your buildings, important records, and inventory from flooding; drastically decrease your recovery/clean-up time after storm; and potentially save your business. The Institute for Business and Home Safety reports that more than 25 percent of businesses that close due to storm damage never reopen.



For More Information

- For technical information on the costs of incorporating different flood-resistant building techniques (including freeboard), see the American Institutes for Research's 2006 study, *Evaluation of the National Flood Insurance Program's Building Standards* (<http://www.fema.gov/library/viewRecord.do?id=2592>)
- For general information on the National Flood Insurance Program, see www.FloodSmart.gov.
- For specific questions on flood insurance rates, see a licensed insurance agent.
- Businesses looking to prepare for storms and other catastrophic events should visit the Institute for Business and Home Safety's website (ibhs.org)

¹ V zones: This Flood Insurance Rate Map (FIRM) designation refers to coastal areas that are subject to the highest levels of wave energy and flooding.

² A zones: Also a FIRM designation, coastal A zones are subject to flooding but with less wave energy than V zones (i.e., wave heights less than 3 feet).