STARR
Strategic Alliance for Risk Reduction

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News from Region X

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Strategic Alliance for Risk Reduction
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Idaho Success in GIS

Developing Building Footprints from ICRMP Dataset

Idaho Counties Risk Management Program (ICRMP) was formed in 1985 by several Idaho Counties at a time when private insurance markets were no longer available to local governments. ICRMP is now the primary source of property and casualty loss protection for Idaho local governments including counties, cities, and special purpose districts. ICRMP insured properties tend to be assets essential for the functioning of government and the economy including hospitals, waste water treatment facilities, and schools. ICRMP maintains a database of the facilities that they insure that includes the postal delivery address of each facility and some Global Positioning System derived coordinate locations (GPS locations).

The seed for this project sprouted during a 2009 No Adverse Impact workshop in Boise, Idaho. Jerry Mason, legal counsel for the ICRMP during a break in the conference, asked Mary McGown, State Floodplain Coordinator, if the Idaho Department of Water Resources (IDWR) would be able to help ICRMP figure out the flood risk exposure of the many public facilities it insures across the state.

IDWR agreed to conduct a pilot project, funded by ICRMP, on 46 facility records. The project scope was to convert the facility records into GIS point locations and building footprints and then compare the footprints to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) and Digital Flood Insurance Rate Maps (DFIRM) to identify the flood hazard zone for each facility. The project was conducted in four phases:

Example of a geocode point and building footprint of a county building

- Use of ESRI ArcGIS software geocoding tools to analyze the postal address data
- Analyze and convert GPS locations to points
- Create building footprint polygons based on the point information created by the previous analyses
- With information from internal and external data sources, including Google Maps, review the location of the building footprints and appropriate FIRMs and DFIRMs in order to identify whether the footprint is within a mapped flood hazard zone.

All records had some form of postal address that could be entered into the ArcGIS Geocoding tools. After the initial geocoding process, 74% of the records were assigned point locations. Point locations for unmatched records were determined from associated GPS location or through external sources, primarily Google Maps, if possible.

Only 46% of the facility records contained a GPS location. In order to use the GPS locations, the coordinates

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Idaho *(cont.)*

had to be converted into a single, numeric format. Basic formulas were used to convert the six different formats into decimal degrees. A GIS layer was then created with ESRI ArcGIS software.

Building footprint polygons were created for 44 of the 46 records using the 2009 NAIP imagery as the base. The GPS locations, the geocode locations, and external sources such as Google Streetmap were used to determine the building location. Significant research was often required to precisely locate the building being digitized.

Above: Example of FIRM Analysis
Below: Facility in Multiple Flood Zones

Although a GPS location generally provided the best indication of a building location, less than half of the records had them. Geocoded locations were at the driveway/street intersection of the building and were on average 35 meters from the identified center of the building footprint. Other factors that contributed errors included several different buildings with the same address, one address that represented several buildings in different places, and a range of addresses associated with a single building.

After the building footprints were created, the flood zone of each footprint was determined by comparing the building footprint with the appropriate FIRM or DFIRM. There were two distinct analyses, one for building footprints in areas where a DFIRM exists and another for areas without DFIRMs. The analysis took nearly 1.5 times longer in areas without DFIRMS. In areas with DFIRMs the analysis could be automated using GIS. The flood zones for 40 of the building footprints were determined. Four building footprints were in unmapped areas without FIRMS or DFIRMS. Two of the building footprints were located in multiple flood zones. The locations of the buildings associated with two records were undetermined.

IDWR is currently using this methodology to identify the locations and create footprints for 170 facilities in ten northern Idaho Counties. A subset of the draft building footprint data was used in a preliminary analysis of at-risk facilities during a declared flood emergency in March 2012. ICRMP expects to realize significant realignment, and perhaps savings, in insurance premiums when structures are properly rated. Ultimately, this could affect the budgets, and hence taxpayers, of the many local governments and special districts that make up ICRMP. A Pre-Disaster Mitigation grant has been applied for in order to extend this project to ICRMP insured structures across Idaho.

Tsunami Vertical Evacuation Video

Tsunami Preparedness Week was March 25-31

FEMA and Washington Emergency Management Division urge all citizens who live along coastlines to take the threat of tsunamis seriously.

In some communities, traditional evacuations are not always an option. FEMA led the development of a new approach to dealing with this challenge called Tsunami Vertical Evacuation.

This video was developed by FEMA Risk MAP, FEMA Region X, WA-EMD, the National Oceanic and Atmospheric Administration (NOAA), and the National Tsunami Hazard Mitigation Program (NTHMP). Watch the video on how to use this new approach at http://youtu.be/_h26_DUKMzA.

Questions or comments?

If you have suggestions for the Region X Newsletter staff or if you would like to submit an article or topic for a future issue, we would like to hear from you! Please contact the FEMA Region X Service Center by email at RXNewsletter@starr-team.com.

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Increased Cost of Compliance Coverage

Using ICC in Local Hazard Mitigation Projects

The National Flood Insurance Program (NFIP) Increased Cost of Compliance (ICC) coverage can provide significant benefits to the NFIP policyholder whose community is requiring mitigation following a substantial or repetitive flood damage declaration. This article focuses on effectively using ICC as a source of funding to elevate, floodproof, or demolish buildings damaged by flood.

What is ICC?

ICC provides up to $30,000 to help NFIP policy holders comply with local flood hazard regulations following substantial flood damage. This benefit is in addition to the policy's building coverage for structural damage. The amount paid for structural damage plus ICC cannot exceed the NFIP maximum limits of coverage for the type of building. NFIP policyholders file an ICC claim with their flood insurance agent when the community declares their structure to be substantially damaged by flood, or the building has sustained certain repetitive flood losses.

When can ICC be claimed?

ICC may be claimed when the community requires by regulation that a flood-damaged building be brought into compliance with current flood hazard regulations. For most communities, a building located in the Special Flood Hazard Area (SFHA) that sustains substantial damage will trigger the need for the entire building to be brought into compliance with current regulations. Substantial damage is minimally defined by the NFIP as damage where cost to repair the damage equals or exceeds 50% of the market value of the structure before the damage occurred. As of April 1, 2011, the NFIP allows a lower substantial damage threshold as long as it is adopted, and enforced uniformly in the community floodplain management ordinance or law. Lower substantial damage thresholds are rare in Region X, but in light of the revised substantial damage definition communities may wish to review their flood mitigation strategies and ordinances.

ICC is also available to policyholders whose buildings have sustained repetitive losses. As before, the community must have provisions in its floodplain ordinance requiring repetitive loss buildings to be brought into compliance for the policyholder to qualify for ICC.

Outside the SFHA, ICC is available for substantially damaged or repetitive-loss buildings only if the community regulates an inundation area larger than the SFHA to a flood elevation, such as the water surface elevation of the flood of record, or to the 0.2 percent annual-chance, also known as the 500-year flood, elevation reported in the Flood Insurance Study.

What can ICC be used for?

ICC can be used to elevate, floodproof, or demolish a substantially damaged or repetitive-loss building. Building owners may use ICC to help pay a contractor directly to complete the required mitigation or they may use ICC to provide some or all of the non-Federal funds required to participate in a local hazard mitigation project.

How can ICC be used as part of a flood mitigation project?

FEMA grants often provide funding to mitigate buildings vulnerable to damage from a variety of natural hazards. Most of these grants require a non-Federal match. When NFIP-insured buildings are damaged by flood, ICC can be a valuable source of non-Federal match.

Communities manage local hazard mitigation projects, but ICC is an NFIP insurance benefit provided to the individual building owner. One of the challenges faced by communities who wish to use ICC as local match is accounting for how the ICC settlement is used. Asking the building owner to assign the ICC settlement to the community is one way to ensure that funds are used for their intended purpose.

What are the benefits of assigning ICC to the community?

ICC assignment can simplify community hazard mitigation grant project management and accounting. The community must ensure that grant funds are not used to pay for activities that were also funded by another source. This type of double dipping is known as "duplication of benefits." Since ICC is made available to pay for mitigation activities on a specific structure, the entire ICC settlement must be applied to that structure before grant funds are used. It can be difficult to ensure that grant funds are not duplicating benefits when the ICC settlement is paid directly to the NFIP policy holder.

Whether ICC is paid directly to the policy holder or assigned to the community, it is essential that the community closely manage the project to document how much ICC was paid and whether the funds were used for eligible mitigation activities on the same building to which the ICC settlement was directed. In other words, assigned ICC cannot be pooled into a common match fund to be used for any building participating in the local hazard mitigation grant project.

For more information on the ICC benefit and resources including the ICC Handbook, steps for assigning ICC to the community, and updates to substantial damage definitions visit the STARR Region X website at www.starr-team.com.

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Training Schedule

(All times Pacific)

Floodplain Management in Approximate A Zones
April 11, 10:00 am – 11:00 am
Online* – 1 CEC

Elevation Certificates
April 20, 10:00 am – 12:30 pm
May 17, 10:00 am – 12:30 pm
Online* – 2 CECs

L273 Managing Floodplain Development Through the NFIP
April 23-26
Medford, Oregon
12 CECs
Karen.Wood-McGuiness@fema.dhs.gov

CACs and CAVs
April 26, 10:00 am – 11:00 am
Online* – 1 CEC

Determing a Base Flood Elevation
May 11, 10:00 am – 11:00 am
Online* – 1 CEC

Elevation Certificates in A Zones
June 14, 10:00 am – 12:30 pm
Online* – 2 CECs

*To register for online courses, visit STARR's training site online at j.mp/starrtraining, or email RXTraining@starr-team.com.

NORFMA News

Save the dates! The Northwest Regional Floodplain Managers Association (NORFMA) has announced two conferences later in this year. The Annual Conference is scheduled for September 19-21 in Spokane and there will be a satellite mini conference in Boise on August 2nd and 3rd.

For more information, visit www.norfma.org.

Featured Training

Floodplain Management in Approximate A Zones

Editor's note: Due to publication delays, this training may have already occurred. The session recording is available for online viewing. Email rxtraining@starr-team.com for details.

April 11, 2012, 10:00 am PDT

This session will highlight special considerations for floodplain administrators when regulating development without Base Flood Elevations. Topics include A Zone regulations, estimating BFEs, and permit requirements.

One (1) CEC for CFMs

Presenter: Karen Wood-McGuiness, FEMA Region X

CACs and CAVs

April 26, 2012, 10:00 am PDT

Has your community ever been caught off guard when the State NFIP Coordinating Office or FEMA contacted you to schedule a Community Assistance Contact or Visit (CAC/CAV)?

As the community's Floodplain Administrator, have you ever wondered why they want to come to your community to discuss your floodplain management program and what type of information to provide? This training will provide the reason and purpose of a CAC or CAV, what to expect prior to a visit by the State or FEMA, expectations of a community's record-keeping system to assist the State/FEMA's visit and identify resources to assist you in managing your floodplain management programs.

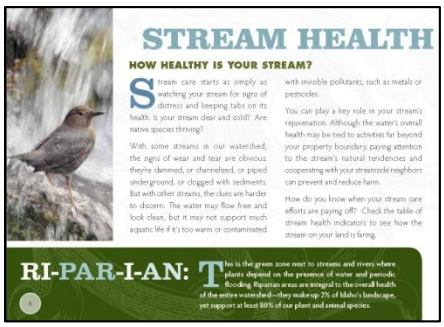
One (1) CEC for CFMs

Presenter: Jamie Huff, FEMA Region X

Ask the Help Desk!

If you have questions about a mapping project, policy changes, mitigation planning, floodplain compliance or general questions related to the NFIP, please contact the STARR Region X Help Desk. STARR staff will route and research your question, and respond within three business days. Submit your questions via email, the address is RegionXHelpDesk@starr-team.com.

Suggested Reading



Idaho Stream Care Guide

Produced by the Idaho Department of Fish and Game, this is a terrific resource for anyone who lives near or depends on healthy streams. The guide can be found on Idaho's DWR website, www.idwr.idaho.gov, or at www.starr-team.com.

More CRS Webinars

In case you missed it, ISO is hosting two additional webinars this month to review the changes in the new 2012 CRS Coordinator's Manual. Mark your calendar for April 24th and 26th, at 11:30 am Pacific. Visit www.crs2012.org to register.

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