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Douglas County is suing the federal government over new flood insurance rate maps, seeking judicial review and a temporary injunction so the new Federal Emergency Management Administration flood maps would not go into effect in January as scheduled.

- The Record Courier

Ch-ch-ch-ch-changes . . .

Here in Northern Nevada Fall seemed to fall like a ton of bricks this year with cold temperatures coming fast on the heels of record breaking highs in September. (So much for the tomatoes!)

Additionally, some important changes to the National Flood Insurance Program (NFIP) took effect in the beginning of October. Most notably flood insurance premiums, on average, went up. Increased prices is never good news for consumers, especially in these difficult times with unemployment and foreclosures at record highs throughout our state. The increased cost of flood insurance highlights the need to "get the word out" to Nevada citizens impacted by an impending Flood Insurance Rate Map release that flood

insurance should be purchased prior to the flood map effective date in order to take advantage of NFIP grandfathering rules for flood insurance premiums (see *NFIP Map & Zone Grandfather Rules*, page 7).

Changes are also taking place in the manufactured home industry due to changes in rules for the Department of Housing and Urban Development (HUD). The issue of community compliance of manufactured home installations with local floodplain management ordinance has long been problematic throughout Nevada because of the separate permitting process by Nevada Manufactured Housing Division. The changes in HUD rules should impact manufactured home installation compliance with

floodplain management standards for the better, here and throughout the country (see HUD's *Manufactured Home Installation Standards*, page 3). Also the imminent release of a long awaited update to FEMA 85, *Manufactured Home Installation In Flood Hazard Areas*, promises to provide updated and more easily applicable information on manufactured home installation standards, including examples of typical installations that are considered compliant by FEMA.

Change is inevitable. I hope that the changes life brings you this Fall and Winter are good ones for you and your community.

*Kim Groenewold, PE, CFM
Nevada Floodplain Manager*

Flood Insurance Rates Increase

On October 1, 2009, changes to the NFIP took effect including increases in rates, standard deductibles, and basic insurance limits. These combined changes resulted in an average premium increase of 8 percent. Changes include:

- The standard deductible of \$500 is discontinued; the new standard deductible for Post FIRM properties is now \$1000 and for Pre-FIRM properties is now \$2000.
- Two new building types have been added to the flood insurance rate charts; elevated on crawl-space and non-elevated with sub-grade crawlspace.
- A check box indicating a "grandfathered" policy has been added to insurance application forms to ensure that underwriters and lenders are aware of eligibility for the lower policy premium.

For more information, go to www.floodsmart.gov.

New Nevada Manufactured Home Installation Standards

The Second Edition of *The Nevada Manufactured Home, Mobile Home and Commercial Coach Installation Standards* was published in March 2009. Significant revisions to the Installation Standards were made in response to revised Manufactured Home Installation Program rules published in June 2008 by the U.S. Department of Housing and Urban Development (HUD). FEMA worked with HUD to include provisions related to flood hazard areas.

Among other changes, the Installation Standards now require that “homes must be installed on foundation supports that are designed and anchored to prevent floatation, collapse, or lateral movement of the structure.” While specific provisions for flood hazard areas are now included, the Installation Standards do not incorporate all of the specific NFIP requirements. Rather, reference is made to requirements of the *Local Authority Having Jurisdiction (LAHJ)* as well as floodplain management regulations in 44 CFR 60.3. With regard to installations in

flood hazard areas, the LAHJ would be the NFIP participating community (City, County or Tribe).

Significant additions to the Installation Standards that relate to floodplain management include:

General—Manufacturer’s installation instructions must indicate whether or not the foundation specifications have been designed for flood-resistance and, if so, specify the conditions of applicability for velocities, depths or wave action.

- *Chapter 302.03 Grading* — Requires drainage to divert surface water away from the home and that ditches and culverts used to drain surface runoff meet requirements of the Local Authority Having Jurisdiction (LAHJ).
- *Chapter 308.05 Installation of Manufactured Homes in Flood Hazard Areas* — Incorporates elevation and anchoring methods and practices found in FEMA’s floodplain management regulations.
- *Section 308.05 (c) Pre-installation Considerations (for Flood Resistance)* — makes the manufactured home installer responsible “for determining whether the manufactured home site lies wholly or partly within a flood hazard area as shown on the Local Authority Having Jurisdiction’s (LAHJ’s) Flood Insurance Rate Map, Flood Boundary and Floodway Map, or Flood Hazard Boundary Map, or if no LAHJ, in accordance with NFIP regulations.”

- *Section 308.05 (d)(2) Outside Appliances* — Appliances installed on the manufactured home site in flood

**THE NEVADA
MANUFACTURED HOME
MOBILE HOME
&
COMMERCIAL COACH
INSTALLATION STANDARDS**

First Edition Published August 2006
Second Edition Published March 2009

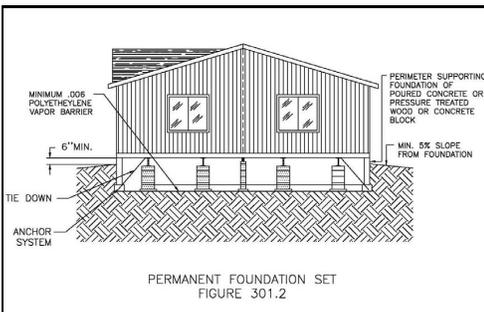
Published by
Nevada Home Alliance
Nevada Manufactured Home Association
And
The Modular Building Institute of Nevada

In conjunction with and approved by
The State of Nevada
Department of Business and Industry
Manufactured Housing Division

hazard areas must be anchored and elevated to or above the same elevation as the Lowest Floor elevation. Appliance air inlets and exhausts must be likewise be elevated to or above the Lowest Floor Elevation.

References to the LAHJ throughout the Installation Standards ensure that, in the future, manufactured home installers will be contacting local floodplain managers for information on flood hazard zones and elevation standards. The new Installation Standards apply only to new installations and, while they do not address existing problems with inadequate manufactured home installations in Nevada flood hazard areas, they do begin to address a long-standing disconnect between manufactured housing and floodplain management regulations.

The manufactured home installer is responsible for determining whether the site lies within a Special Flood Hazard Area



PERMANENT FOUNDATION SET
FIGURE 301.2

New manufactured home installations in flood hazard areas must be anchored to prevent floatation, collapse or lateral movement of the structure.

- *Chapter 301*

HUD's Manufactured Home Installation Standards

By Rebecca Quinn, from ASFPM's September Issue of "The Insider"

Here's Something You Might Find Interesting . . .

In 2000, Congress passed – and the President signed – an act that more and more state and local floodplain managers are realizing will impact their jobs. But in a good way!

The Manufactured Housing Improvement Act of 2000 was passed to modernize federal requirements applicable to manufactured housing. At the time, more than 19 million Americans lived in approximately 9 million units and manufactured housing had become one of the fastest-growing segments of the housing industry. That rate has slowed considerably, dropping from an all-time high of 373,000 units shipped in 1998 to just over 81,900 units in 2009 (<http://www.census.gov/const/www/mhsindex.html>). Still, many NFIP communities regularly process applications for permits to place and replace units in mapped special flood hazard areas.

The Manufactured Housing Improvement Act does two key things that have bearing on floodplain management. One, it requires HUD to develop standards for the installation of new MFH units, and two, it requires HUD to develop standards for state installation programs. More details on these two elements are explained below.

HUD's Manufactured Home Installation Standards. The Act required HUD to use a balanced consensus committee process for the development, revision, and interpretation of Federal construction and safety standards

for manufactured homes, including "model" installation standards. The final rule for the installation standard was published on October 19, 2007 at 24 CFR Part 3285 *Model Manufactured Home Installation Standard*. It is notable that the regulations apply only the initial installation of new units.

Download the standards from ASFPM's webpage at <http://www.floods.org/xxx> and look up other information from HUD here <http://www.hud.gov/offices/hsg/ramh/mhs/csp.cfm>. It's worth running a word search of the standards (search "flood") to see how it captures some but not all NFIP requirements.

With respect to flood hazard areas, the installation standard requires manufacturers to do one of two things. They must either clearly specify if the foundation specifications have been designed for flood-resistant considerations or if they have not been designed to address flood loads. If the specifications are designed for flood-resistance, the conditions of applicability are to be listed (velocities, depths, or wave action) and the design must be certified by a registered professional engineer or architect. If flood loads are not addressed, the instructions are to direct the installer to "obtain an alternate design prepared and certified by a registered professional engineer or registered architect for the support and anchorage."

The installation standard specifies that in flood hazard areas, homes "must be installed on

foundations engineered to incorporate methods and practices that minimize flood damage during the base flood, in accordance with the requirements of the Local Authority Having Jurisdiction, 44 CFR 60.3(a) through (e), and other provisions of 44 CFR referenced by those paragraphs."

In addition, the standard requires outside appliances to be anchored and elevated to or above the same elevation as the lowest elevation of the lowest floor of MFHs, also requires appliance air inlets and exhausts to be elevated to or above the same elevation; and states that oil storage tanks should be anchored and elevated to or above the design flood elevation, or anchored and designed to prevent flotation, collapse, or permanent lateral movement during the design flood.

Importantly, the burden is on the installer to determine whether a home site is wholly or partly in a flood hazard area. The standard also specifies that the flood hazard zone and BFE are to be determined before an installation method is agreed upon.

State MFH Installation Programs. The Act gave the states five years to adopt an installation program that includes three key elements: (1) adoption of an installation standard (which must meet or exceed the protection provided by HUD's model standard); (2) training and licensing of in-



Flooded homes in the Cedar Grove Mobile Home Park on the Cedar River in Kings County, Washington.

"(Manufacturers) must either clearly specify if the foundation specifications have been designed for flood-resistant considerations or if they have not been designed to address flood loads."

HUD's Manufactured Home Installation Standards

(continued from page 3)

stallers; and (3) an appropriate level of inspection of installed homes. The final rule for the installation program was published on June 20, 2008 at 24 CFR Part 3286 *Manufactured Home Installation Program*. Download the regulations from ASFPM's webpage at <http://www.floods.org/xxx> and look up other information from HUD here: <http://www.hud.gov/offices/hsg/ramh/mhs/mhip.cfm>.

HUD sets prerequisites for installation licenses. Individuals must satisfy minimum experience levels related to installing, constructing, or inspecting manufactured homes, completion of a year of a college program in a construction-related field, or a combination of those experiences. License applicants must complete an initial 12-hour training requirement and must pass an examination. To qualify for renewal, required every three years, licensed installers must complete 8 hours of continuing education. Training instructors must meet certain requirements.

What this Means for Flood-

plain Managers. The benefits of HUD's requirements are obvious. When installed in flood hazard areas, more manufactured homes will be installed on foundations that are specifically designed for flood conditions. And more installers will have to learn about NFIP and community requirements for flood hazard areas in order to determine appropriate foundation designs.

I think our next step is obvious: state coordinating agencies and state floodplain management associations should look into opportunities to develop training in cooperation with the state agencies that are responsible for installation programs. Doing this will get easier later this year, when FEMA anticipates releasing the updated **FEMA 85, *Protecting Manufactured Homes from Floods and Other Haz-***

ards: A Multi-Hazard Foundation and Installation Guide. The revised guidance will include some pre-engineered foundation designs



Protecting Manufactured Homes from Floods and Other Hazards

A Multi-Hazard Foundation and Installation Guide

FEMA 85 / September 2009



that can be used within certain limitations, such as within a range of flood depths and velocities.

“... more manufactured homes will be installed on foundations that are specifically designed for flood conditions”



Public Safety in Multi-Use Facilities

By Andrew Trelease and Kerri Anne Mukhopadhyay,
Clark County Regional Flood Control District

The tough economic times have had a big impact on many Nevada families. With the unemployment rate in Southern Nevada at more than 13 percent, people want to make every dollar count. Government organizations have had to make the same cut-backs, but when does stretching taxpayer dollars start to inhibit public safety? That is a question the Regional Flood Control District is currently being faced with.

The Regional Flood Control District was established in 1985 after a series of severe storms devastated the Las Vegas Valley. In the nearly 25 years since its inception, the District has built 82 detention basins and more than 515 miles of channel and underground storm drain. Typically the District funds the design, construction and maintenance of these facilities.

Now, due to the cost and limited availability of developable land, many entities want to incorporate recreational features into these flood control facilities. The low frequency of rainfall events in Southern Nevada could allow for such multi-use facilities, but questions remain: Should the Dis-

trict allow flood control facilities to be used for recreation, a possible economic and social benefit to the community; and should the public be invited into facilities whose primary purpose is flood control?

The District has policies in place to regulate the use of flood control facilities for recreational purposes. In fact, there are several multi-use facilities in Clark County. Many of these facilities are detention basins with soccer fields, baseball fields and other park amenities. The District allows recreation at higher elevations in detention basins, but discourages any recreational activity within lower basin elevations or in high velocity channels. Compliance with District multi-use policies is largely voluntary at this time.

The multi-use policies for detention basins have been suc-

cessful, but a recent trend toward adding trail systems within flood control channels has prompted the District to

consider revising the regulations.

The District has proposed new policy language which would make compliance mandatory but would tolerate some recreational uses within channels; such as allowing trails to pass under a bridge crossing provided the trail is elevated above the 10-year water surface elevation.

Some of the entities have complained that mandatory compliance would increase the cost to operate and maintain the recreational facilities. They have commented the trail policy would also be expensive and difficult to implement. Additionally, many trail planners believe passing under frequently dry bridges is safer than crossing busy roadways.

That being said, the entities are generally supportive of the new policies, recognizing the need to keep the public safe from the dangers of flash flooding. The District is optimistic the new policies will be adopted to continue providing a foundation for reliable flood control facilities that will also serve the important safety and social needs of the community.



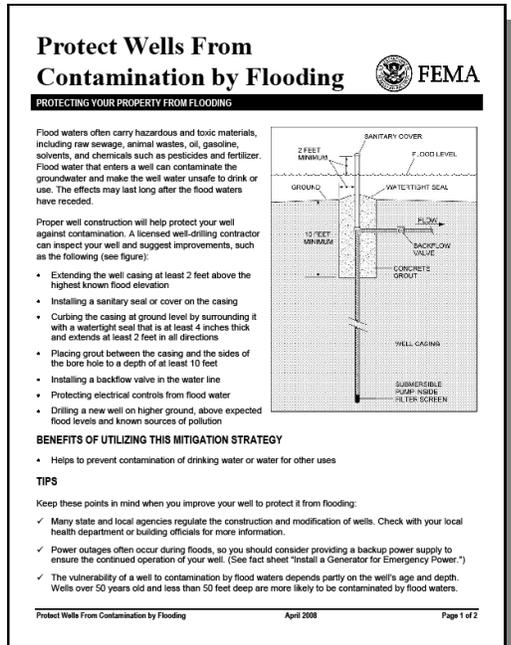
Sandstone Ridge Park at Lower Las Vegas Wash Detention Basin in the City of North Las Vegas



Majestic Park at Lone Mountain Detention Basin in the City of Las Vegas

“... , but when does stretching taxpayer dollars start to inhibit public safety? That is the question the Regional Flood Control District is currently being faced with.”

Protecting Your Property From Flooding— “How To” Series of Fliers



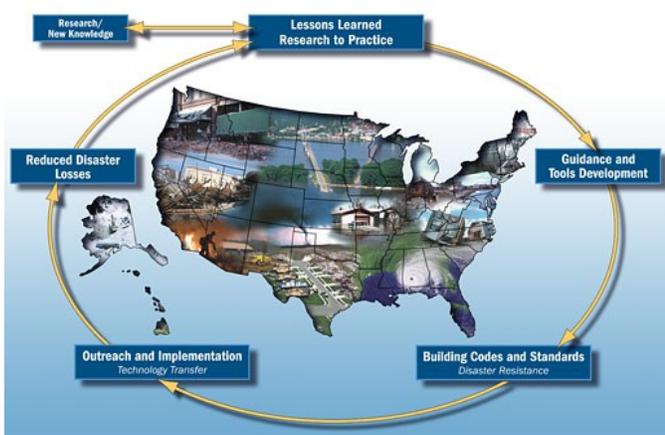
FEMA has developed a series of “How To” fliers that address different aspects of flood protection for homes and businesses. These are one page publications that are easily downloaded from the FEMA website and perfect for distribution along with building permits and other information. Topics addressed in the “How To” series include:

- Protect Wells From Contamination by Flooding
- Install Sewer Backflow Valves
- Raise or Flood proof HVAC Equipment
- Anchor Fuel Tanks
- Raise Electrical System Components
- Add Waterproof Veneer to Exterior Walls
- Dry Flood proof Your Building
- Build With Flood Damage Resistant Materials

To find these one page fliers, go to FEMA website at www.fema.gov and enter “protect your property from flooding” in the search box.

FEMA's Building Science Branch

Who are the FEMA Building Science Branch? For those of us dealing with flood hazards they are:



- The expertise behind FEMA building science and mitigation publica-

tions and NFIP Technical Bulletin series.

- The folks who bring you the flood mitigation training courses at EMI (Emergency Management Institute).
- The people who developed the “How To” series of single page fliers on protecting your home or business from flood damage.

The Building Science Branch is a technical services bureau within FEMA made up of highly skilled subject matter experts. The branch develops and produces technical guidance

and tools focused on fostering a disaster resilient built environment. Located within the FEMA Mitigation Directorate's Risk Reduction Division, the Building Science Branch supports the directorate's mission to reduce risk to life and property by providing state of the art technical hazard mitigation solutions for buildings.

The Building Science Branch has established a helpline (phone and email) for questions related to building science issues: (866) 927-2104 FEMA-Buildingscience-help@dhs.gov

NFIP Map & Zone Grandfather Rules

What is the Grandfather Rule?

A community will occasionally make structural improvements (dams, levees, etc.) to reduce the potential effects of flooding; experience new development aggravating the flooding situation, thereby expanding the floodplain; revise geographical boundaries resulting in the designation of additional flood hazard areas; or provide information to better delineate the Base Flood Elevation (BFE) and/or flood insurance risk zones. When these situations occur, the Flood Insurance Rate Map (FIRM) is revised and republished. The implementation of a new FIRM raises the question, HOW DOES THE NEW MAP AFFECT FLOOD INSURANCE RATES?

To recognize policyholders **who have remained loyal customers of the NFIP** by maintaining continuous coverage and/or **who have built in compliance with the FIRM**, the Federal Insurance and Mitigation Administration has "Grandfather rules" to allow such policyholders to benefit in the rating for that building.

Pre-FIRM (construction prior to the date of the community's initial FIRM)

1. If a policy was obtained prior to the effective date of a map change, the policyholder is eligible to maintain the prior zone and base flood elevation as long as continuous coverage is maintained. The policy can be assigned to a new owner at the option of the policyholder.
2. If a building is Pre-FIRM and a policy was not obtained prior to the effective date of a map change, the applicant is eligible to receive the Pre-FIRM (subsidized) rates based on the new zone rather than the actuarial (elevation based) rates.

Post-FIRM (construction on or after the date of the community's initial FIRM)

1. If a policy was obtained prior to the effective date of a map change, the policyholder is eligible to maintain the prior zone and base flood elevation as long as continuous coverage is maintained. The policy can be assigned to a new owner at the option of the policyholder.
2. If a building was constructed in compliance with a specific FIRM, the owner is always eligible to obtain a policy using the zone and base flood elevation from that FIRM, provided that proof (refer to the Flood Insurance Manual, Rating section for acceptable documentation) is submitted to the insurance company. Continuous coverage is not required.

Preferred Risk Policies

1. Buildings written on Preferred Risk Policies are required to be located in zones B, C, or X on the FIRM in effect on the date of application and on the date of each subsequent renewal.
2. A building, which becomes ineligible for a Preferred Risk Policy due to a map change to a special flood hazard area, can be rewritten on a standard rated policy using zones B, C, or X.

For more information, go to <http://www.fema.gov/nfip/manual.shtm>.

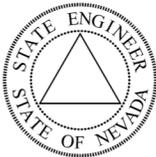
NEVADA FLOODPLAIN MANAGEMENT NEWS

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Nevada Floodplain Management News is a publication of the Nevada Floodplain Management Program.

The Nevada Floodplain Management Program was established in the Department of Conservation and Natural Resources, Division of Water Planning by the 1997 Nevada State Legislature after the need for a statewide flood management program became apparent when damages from the 1997 New Years Flood on the Truckee River were assessed.

In the Spring of 2001 the Nevada Floodplain Management Program was transferred within the Department of Conservation and Natural Resources and was later confirmed by Governor's Executive Order, dated April 10, 2003, to its current residence within the Division of Water Resources under the direction of the Nevada State Engineer.

Training Opportunity

L273—Managing Floodplain Development Through the National Flood Insurance Program

March 2-5, 2010
Las Vegas,
Nevada



Hosted by Clark County Regional Flood Control District and presented by FEMA Region IX and Nevada Division of Water Resources,

this is the same course as is offered at the Emergency Management Institute in Emmitsburg, MD. The course focuses on the NFIP and

floodplain management concepts, maps and studies, ordinance administration, and the relationship between floodplain management and flood insurance.

The course will be presented by instructors from FEMA Region IX, Nevada Division of Water Resources, California Department of Water Resources, Cities of Henderson and Las Vegas, and Clark County Regional Flood Control District.

Enrollment preference will be given to local community officials responsible for administering floodplain management ordinances, including flood-

plain management administrators building inspectors, code enforcement/zoning officers, planners, city/county managers, engineers, and public works officials. However, engineers, surveyors and public officials are welcome as well.

Enroll now as the class is filling up quickly!

For more information about this and other training opportunities, visit the Floodplain Management Program page of the NDWR web site at water.nv.gov.