

KANSAS

FLOODPLAIN MANAGEMENT

TIPS

April 2019

Keeping Manufactured Homes High and Dry

The National Manufactured Housing Construction and Safety Standards Act of 1974, commonly known as the “HUD Code,” sets standards for the proper construction and installation of manufactured homes. This unique “HUD Code” is the only federally-regulated residential building code. 2009 HUD regulations in 24 CFR Parts 3285 and 3286 cite CFR 44 60.3. 44 CFR 60.3 (b) (8) requires “all manufactured homes to be placed within Zone A on a community's FHBM or FIRM shall be installed using methods and practices which minimize flood damage... [and] must be elevated and anchored to resist flotation, collapse, or lateral movement.” Examples of anchoring techniques include “over-the-top or frame ties to ground anchors.”

The average price per square foot of a manufactured home is less than half that of a site-built home. This contributes to affordability but can cause manufactured homes to have a low threshold for substantial damage, especially after depreciation. For manufactured homes that are substantially damaged or are newly installed in floodplains, a variety of measures can be used to meet elevation requirements. These include piers, fill, and stem walls.

One common feature of manufactured homes is a flexible skirt affixed to the frame that hides the undercarriage and anchoring system. If a manufactured home is elevated on piers that are shrouded by material that is flexible and not fastened to the soil, it would still be reported as a Diagram 5 rather than a Diagram 8 on an Elevation Certificate. The material would tear away in a flood and is usually not considered an enclosure. One Kansas community encountered a manufactured home that was surrounded by heavy sheet metal panels affixed to 2” x 4” boards sunken into the ground. This project was considered a crawlspace enclosure and was required to have flood vents.

For further details on resilient manufactured home installation practices, consult [FEMA Manual P-85](#).

In this bulletin...

- **Manufactured Homes**
- **Flood Watch vs. Warning**
- **Levee Safety Case Study**
- **Announcements**
- **Learning Opportunities**
- **Training Registration Form**



Above: This manufactured home became a floating projectile and split in half during a 2011 flood in Manhattan, KS.



Above: A manufactured home elevated on posts (background) and one that is not elevated (foreground).



Above: A manufactured home elevated on piers and fill. The posts are hidden by metal skirting.



Above: A manufactured home elevated on stem walls and fill.

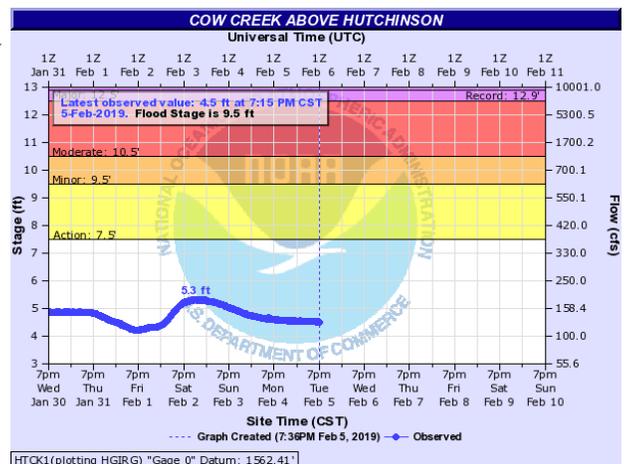
Manufactured Home Ordinance Update

44 CFR 60.3 (c) (12) requires that manufactured homes to be placed or substantially improved on floodplain sites in “an existing manufactured home park or subdivision” be elevated above the BFE “or have a “chassis...supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade.” In areas where the BFE is higher than three feet above grade, manufactured homes can end up being placed below BFE. Communities can adopt a higher regulatory standard simply by removing the “existing...park or subdivision” exemption from their floodplain management ordinance and requiring instead that “manufactured homes...on all sites” be elevated at least one foot above the BFE. This can help residents avoid destructive flood losses, and may help communities avoid loss of Community Rating System (CRS) credit. The 2020 CRS Coordinator’s Manual may include a provision to penalize communities with the “existing park” exemption still on their books.

Stay Alert for Flood Hazards with Warnings, Watches, and Advisories

As spring approaches, Kansas look forward to longer days and sunnier skies. However, spring is also a high-risk season for damaging weather. Learning about National Weather Service (NWS) flood messages can help you effectively communicate risks to your citizens. NWS uses warnings, watches, and advisories to prioritize alerts. A Flood Warning is issued to provide notification of any overflow or inundation by water which causes or threatens damage. A Flash Flood Warning specifically provides urgent notice of an extreme surge of water into a normally dry area or of a rapid water level rise in a stream or creek. It’s a signal to take action promptly and move from a flood-prone area to higher ground! A Flood Watch signals that conditions are favorable for a flood even if the flood is not certain to occur. Finally, a Flood Advisory signals a forecast of flooding that predicted to be a nuisance but not severe enough to directly threaten life and property. Please note that the Flood Advisory is not used by all Forecast Offices.

NWS provides additional data that can help contextualize messages. For instance, the Bulletin of the American Meteorological Society published a [study](#) in 2016 that compared a variety of NWS products. Researchers found that the Hydrograph was the most effective at communicating an actionable perception of tangible risk. Another key finding was that messages from neighbors, friends, and family were especially influential. Effective and timely communication is vital, as flash floods can strike in a matter of minutes. Perhaps your community could integrate NWS information with social media to communicate messages that balance a warm welcome of spring with a healthy respect for severe weather.



Above: Hydrographs show clear thresholds of flood severity (courtesy NWS).

Erie, KS Levee Emergency Response

Does a levee provide flood protection for your community? Levees can provide valuable benefits, but should not be relied upon as the only line of defense for homes and businesses in your community. Implementing a full menu of risk reduction measures helps bolster flood resilience even in the event of a levee failure. The City of Erie recently experienced a close call with such a scenario. On October 10, 2018 the Neosho River rose to 35.8 feet—just 0.2 feet short of Major Flood Stage. Community officials responded quickly with decisive action. Neosho County Public Works, Labette County Public Works, and Kansas Department of Transportation crews collaborated to close the gap with gravel and large rocks.

This exciting story provides a good case study to inform flood preparation in other communities. If your phone rang at 3 a.m. to inform you of a levee breach in your jurisdiction, would you be prepared? Collaborating with your county’s Emergency Manager and participating in regular disaster drills facilitates faster and more reliable actions when minutes count. In the words of former FEMA director R. David Paulison, “the worst time to exchange business cards is during a disaster.”

It is much easier to take steps in advance to avoid a levee failure than to respond to a levee failure during a crisis. Many Kansas levees are popular sites for outdoor activities such as jogging and cycling. Building a mixed-use trail along the top a levee is a good way to raise community awareness of levee functions and riverine natural resources. However, intensive activities such as motocross riding and all-terrain vehicle use can erode levees and weaken their flood protection capabilities. Posting “No Trespassing” signs and encouraging residents to report destructive activity is a responsible way to ensure that your community’s levee remains strong.

This year, the Kansas Department of Agriculture Division of Water Resources (KDA-DWR) is working with the U.S. Army Corps of Engineers to provide levee safety signs to interested communities. The signs will provide an informational message to visitors with details on the levee’s history and function. They will also display a warning message to trespassers with details on the consequences of levee damage. If you would like to request signs for your community, contact Martin Koch at Martin.Koch@ks.gov or 785-296-0854.

Even well-maintained levees can fail during an exceptional flood event. To learn more about tactics for protecting your community, visit <https://agriculture.ks.gov/divisions-programs/dwr/floodplain/flood-safety-2/levee-safety>



Above: The Neosho River at flood stage near the Erie, KS water plant intake station (courtesy Buddy Stark).



Above: The Neosho roars under the Pryor Rd. bridge just south of Erie, KS during the October 2018 flood event (courtesy Buddy Stark).



Above: Water pours through a breach in a levee near Erie, KS (courtesy Buddy Stark).

Training Opportunities

The Floodplain Management Program will host the following training sessions throughout Kansas. If you are interested in any of the no-cost training opportunities, please contact Martin Koch at 785-296-0854 or Steve Samuelson at 785-296-4622. A training registration form is in this newsletter.

Post-Flood Responsibilities

This free class is intended for community officials responsible for administering floodplain management regulations. The course focuses on what to do during and after a disaster event. Topics include substantial damage, permitting, Increased Cost of Compliance and violations. Allowed 3.5 hours for certified floodplain managers. Limited to 20 participants.

• El Dorado—Thursday, May 16th from 8:30 a.m.—12:30 p.m.

Basics of the National Flood Insurance Program

This class is for officials responsible for administering their local floodplain management ordinance. The focus is on the National Flood Insurance Program (NFIP) and concepts of floodplain management, maps and studies, ordinance administration, and the relationship between floodplain management and flood insurance. Provides 3.5 hours Continuing Education Credit (CEC) toward the Certified Floodplain Manager (CFM) credential. Limited to 20 participants.

• S. Hutchinson—Tuesday, June 4th, 2019 from 8:30 a.m.—12:30 p.m.

Violations and Enforcement

This free class is intended for community officials responsible for enforcing floodplain management regulations. The course will focus on various types of violations, steps toward correcting violations, and enforcement procedures. Provides 3.5 hours Continuing Education Credit (CEC) toward the Certified Floodplain Manager (CFM) credential. Limited to 20 participants.

• Ellinwood—Thursday, July 11th, 2019 from 8:30 a.m.—12:30 p.m.

Substantial Damage Overview

Substantial Damage Estimations are one of the most difficult parts of the NFIP. Come to this course and learn as much as you can before you have a fire, flood or tornado in the floodplain in your community. A laptop computer with Substantial Damage Estimator (SDE) software is necessary for this class. Attend this free seminar to learn about NFIP requirements, what constitutes substantial damage, when and where to do damage estimations, using the substantial damage estimation software, tips for damage estimating, as well as insurance claims and related insurance questions. The class includes both classroom lecture and field exercise components. Allowed 3.5 hours CEC for CFM. Limited to 20 participants.

• Information coming soon—stay tuned for a future course in Garden City later this year!

Find more information about floodplain management from Kansas Department of Agriculture
Division of Water Resources on line at:
<http://agriculture.ks.gov/divisions-programs/dwr/floodplain>

Email saves money on postage. The electronic newsletter also has links and the photos are in color. If you are getting this newsletter by postal mail and would prefer email please contact Martin Koch at Martin.koch@ks.gov.

Mark your calendar. The Kansas Association for Floodplain Management 2019 conference will be September 4 and 5 in Lawrence. More information will be posted at the website: www.kafm.org. Registration will be done through a link on the website. If you have questions about registration please contact Jon Bristor, Chairman, at 620-326-2207.

Kansas Department of Agriculture
Division of Water Resources
Floodplain Program
Training Registration Form

Name _____

Title _____

Organization _____

Address _____

City _____ State _____ Zip _____

Telephone _____ Fax _____

E-mail _____

Name, date and location of training you will attend _____

*Please share this invitation with anyone else who could benefit from the training.

**Classroom locations will be sent to registered participants one week before the training.

Please mail or fax your registration to:

KANSAS DEPARTMENT OF AGRICULTURE
FLOODPLAIN MANAGEMENT PROGRAM

6531 SE Forbes Ave., Suite B

TOPEKA, KS 66619

Fax to: 785-296-8298

For questions about training, please contact Martin Koch by email at martin.koch@ks.gov or by phone at 785-296-0854, or contact Steve Samuelson by email at steve.samuelson@ks.gov or by phone at 785-296-4622.

Please help us keep our records current. If the name that appears on this newsletter is for an individual no longer with your organization, please call 785-296-4622, or email steve.samuelson@ks.gov to report the change.

4626
Kansas Department of Agriculture
Division of Water Resources
Topeka Field Office
Floodplain Management
6531 SE Forbes Ave., Suite B
Topeka, KS 66619

ASFPM 2019 National Conference in Cleveland

The 2019 Association of State Floodplain Managers National Conference will be May 19-24, 2019 in Cleveland, Ohio. This conference is an excellent opportunity for floodplain managers to receive training on mapping technologies, regulations, permitting, outreach and best practices. It is estimated the conference will be attended by more than 1,000 floodplain management professionals. This conference is great chance to meet people for networking and to learn the latest news in floodplain management. Visit www.floods.org for more information.

KDA/DWR Water Structures Floodplain Program Staff

Steve Samuelson, CFM, NFIP Coordinator	785-296-4622	steve.samuelson@ks.gov
Tara Lanzrath, CFM, Floodplain Mapping Coordinator	785-296-2513	tara.lanzrath@ks.gov
Martin Koch, CFM, NFIP Specialist	785-296-0854	martin.koch@ks.gov
Joanna Rohlf, CFM, GISP, Floodplain Mapping Specialist	785-296-7769	joanna.rohlf@ks.gov
William Pace, Floodplain Mapping Specialist	785-296-5440	william.pace@ks.gov

Mailing Address:
6531 SE Forbes Ave., Suite B
Topeka, KS 66619
Fax: (785) 296-8298

<http://agriculture.ks.gov/dwr>