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# Floodplain Management Today



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NEBRASKA DEPARTMENT OF NATURAL RESOURCES FLOODPLAIN SECTION MARCH 2016

## Highwater Mark Campaign

By Mitch Paine, CFM

Of all natural hazards, flooding affects the most people and property every year. Even though the problem of flooding seems prevalent to some people, much of the general public doesn't realize the risk that flooding poses. One of our roles as floodplain managers is to help the public, particularly those who live in flood risk areas, understand the risk, grasp the reality, and prepare their families for the inevitability.

### Also Inside This Issue

<b>Flood Insurance</b>	<b>3</b>
<b>Violations</b>	<b>4</b>
<b>Full NeDNR Staff Profiles</b>	<b>6</b>
<b>Training Opportunities</b>	<b>9</b>



Photo 1. Tanna Wirtz, CFM, floodplain administrator for Washington County, stands next to the highwater mark sign near the Missouri River.

Many people have trouble understanding flood risk because they have never experienced, seen, or heard of it in their community before. A common phrase we all hear is “we’ve never had flooding here before, why should we have to build our house up?” We can’t, of course, go back and create flooding to show people what it looked like when flooding actually did occur. But, we can show people aspects of historical floods to help the public visualize history.

The Highwater Mark Campaign, an initiative of the Nebraska Silver Jackets team, aimed to do just that, show people historic flood levels from “the big flood” in history. In Omaha that big flood was 1952, in Lincoln it was 1908, and in Schuyler it was 2008. The big flood may be out of the memories of some or all of a community, but we can ensure fewer people are harmed during the next flood by reminding the community members of significant historical events. Highwater marks are important tools in studying flood history and flood risk. They help engineers understand the characteristics of large flood events.

Nearly 20 highwater mark signs were requested by communities across the state from Omaha to Hooper to Scottsbluff. These signs are placed in prominent locations that will connect real events in history to modern-day flood risk. On each of the signs reads a story from a flood event in that community's history. For example, in Louisville, the Mill Creek flood of 1923 remains the deadliest flood in the city. The sign reads, "September 28, 1923: On this day, a cloudburst storm sent water from Mill Creek overflowing its banks in Louisville. Almost every business on Main Street was flooded. When the waters subsided, 3 houses were swept away and 12 people had died. The flooding left mud measuring from 4 inches to 1-foot deep in many homes and businesses."

The sign located in Bellevue along the Missouri River reads, "April 7, 1952: On this day, 20 families evacuated from nearby homes as the Missouri River rose from Niobrara to Rulo, Nebraska. There were similar evacuations in 1960, 1962, and 1984. On June 18, 1990, nearly 30 homes had floodwater up to 4 feet deep at the Iske Park and Holub's Place Subdivisions. After flooding damaged the same homes in 1993, many were bought and removed by the Papio-Missouri River Natural Resources District." At this location, a surveyed elevation marker will show visitors the height of the floodwaters in 2011 as well as the height of the base flood elevation.

An electronic code on each sign will take the visitor to a website where they can learn more about flood history and flood safety. This project will hopefully help the average citizen better understand flood risk around the state and contribute to better individual and community decisions about flooding. The highwater mark signs were printed by the US Army Corps of Engineers – Omaha District and put together by the USACE and the other agency partners that make up the Silver Jackets team: NeDNR, the Nebraska Emergency Management Agency, the National Weather Service, the US Geological Survey, and local communities.

Visit the following site to learn more: <http://floods.dnr.nebraska.gov>.

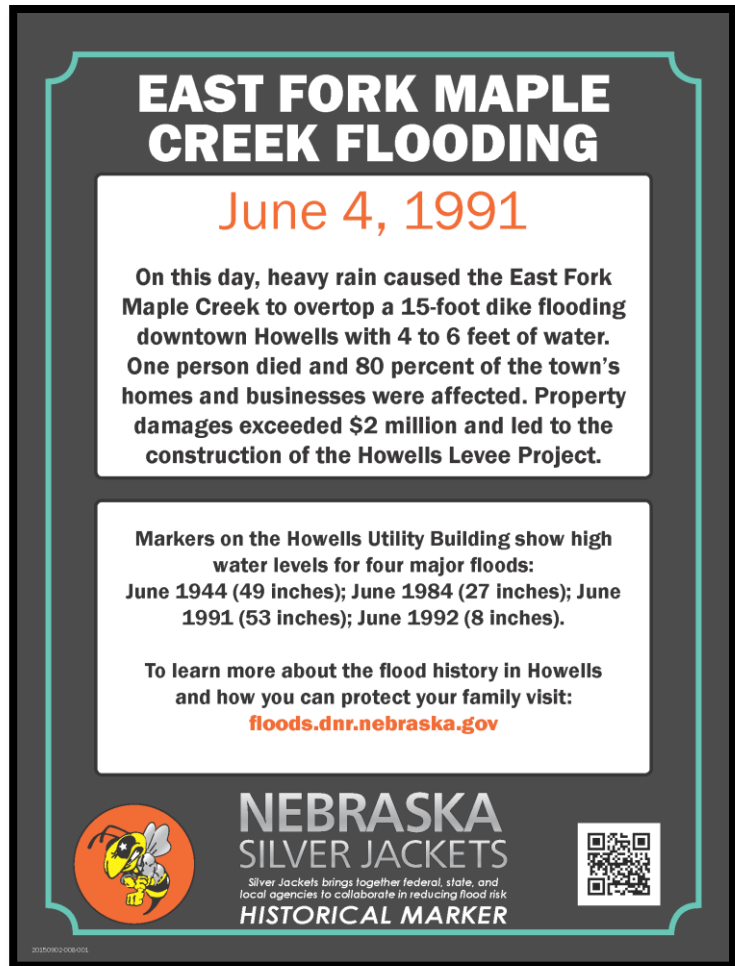


Photo 2. This is the highwater mark sign in Howells.

# Grandfathering and the Newly Mapped Procedure

By Chuck Chase, CFM

In the last newsletter we had an article addressing the newly mapped procedure and an upcoming deadline for your citizens whose homes had been newly identified in the SFHA since October of 2008. The application of the newly mapped procedure to a community getting new maps in the future is still a pertinent subject.

When new Flood Insurance Rate Maps (FIRMs) are created, we may discover a property is actually at a higher risk of flooding than previously determined. In this case, the owner may wish (or be required by his mortgage institution) to purchase flood insurance. Two avenues can be used in conjunction with each other or individually to provide insurance premium savings to the owner.

## Grandfathered Rates

Let us assume an X zone property has, with the new map, now been determined to be in an A zone of some type. They can purchase a preferred risk policy (PRP) now and be eligible for a standard X policy (sometimes called standard grandfathered policy) and be locked into a potentially lower rate; this is called the “continuous coverage provision.” This provision requires the policy to be in effect before the new maps become effective. The Standard X policy can be half the cost of a normal policy for someone who builds in a floodplain.

A property owner can also get the grandfathered rate anytime; even several years after the new maps become effective, by showing the structure was either built in compliance with the maps in effect or in compliance with the Base Flood Elevations at the time of construction. This is called “built in compliance.” This *does not* apply to pre-FIRM homes. Homes built before the community’s first FIRMs became effective (pre-FIRM) by definition were not built having to comply with a map. To lock into a standard X rate pre-FIRM homes should get coverage before the new maps become effective to utilize the continuous coverage aspect of the standard X rate.

## The Newly Mapped Procedure

With the newly mapped procedure, the home owner has a year after the new FIRMs become effective to purchase flood insurance at the rate available before the new map. Thereafter, the insurance premiums will gradually increase until it reaches the actuarial rate, which could be the Standard X rate mentioned above. The insurance is to not go up by more than 18% per year.

If a house is pre-FIRM, the homeowner can still take advantage of the newly mapped program after the maps have become effective during that first year. Yet, as mentioned above, they have forfeited their grandfathering opportunity. Their rate will continue to increase (no more than 18%) until it reaches the full actuarial rate for the A zone they have been mapped into. If a person owns a pre-FIRM home it is therefore important for them to get coverage before the new maps become effective (continuous coverage clause) in order to take advantage of both grandfathering and the newly mapped procedure.

Insurance agents should already be aware of these programs. Yet, your community looks to you, the floodplain administrator, as the floodplain expert for your community. A basic knowledge of these programs is a good tool to have in your toolkit.

# Ugly is Not a Floodplain Violation

By Chuck Chase, CFM



Yes, I can clearly see several violations in this photo. Yet, unfortunately, “ugly” is not one of them. This article is the first part in a series we will present on floodplain management violations and enforcement. Many floodplain administrators have asked our office about dealing with violations situations. This year we hope to offer a workshop on the topic.

We all know about the options in the ordinance

dealing with fines and legal action. Yet it’s to everyone’s best interest to gain compliance without these more aggressive tools. As Theodore Roosevelt said, “Speak softly and carry a big stick.” So this week we will address the “speaking softly” aspect of floodplain management, and save the “big stick” for the next newsletter.

## Know Your Ordinance

Knowing your floodplain ordinance thoroughly will allow you to speak with confidence. You will be able to address issues with an air of collaboration without the hint of uncertainty. Some perceive this uncertainty as a reason to simply do what they want. And be very familiar with your Flood Insurance Rate Map.

## Watch Your Body Language

The goal in any situation is to achieve compliance voluntarily, not by resorting to fines or other enforcement actions. Therefore, you should remain professional and avoid giving the impression you are above the person you are dealing with. If they come to your office and stand there venting at you, stand as well. If they sit, you sit too; don’t cross your arms; give eye contact; hold the calls; give the owner your attention. All of these strategies will help everyone, including your bosses, see that a reasonable solution can be found.

## Listen

Often, the property owner simply wants to be heard. Try paraphrasing what they say and repeat it back to them. Allow them to correct the parts you misunderstood. Listen to them; even empathize with them if you can. If mistakes have been made by your office, admit them. There is no need to be defensive. The ordinance is still the ordinance and ultimately we are not looking for who is right or wrong, we are looking for compliance.

Take good notes, but be cautious. If this issue goes south, your notes may end up as evidence. Keep them professional.

### Flood Insurance Rate Table

If a property owner is determined to build their property out of compliance with your regulations and below BFE, it might be a good idea to talk about flood insurance implications they may run into. For example, a one-story home built 1 foot below BFE might be about \$6700/year and the same home built 2 feet above BFE might be about \$650/yr. This may help demonstrate what they are getting in to and to show them you are trying to help them rather than punish them. If they are not planning on purchasing flood insurance, they will know that their decision will devalue their property and it is not in their best financial interest.

### Final Thoughts

Hopefully, your professionalism and good sense will encourage everyone to follow the rules. In the next *Floodplain Management Today*, we'll cover the heavier enforcement tools at your disposal.

Furthermore, if you have recommendations or experiences you would like to share, we'd like to hear about them. The more examples we have, the better advice we can give to other communities in similar situations.

## Spring Flood Safety

By Mitch Paine, CFM

Spring flood season is right around the corner. Every year, around the state and the country, families are caught unprepared when flooding happens. Whether it's preparing a disaster supplies kit or finally purchasing flood insurance, there are many steps that Nebraska families can take to prepare for the unfortunate event of flooding. The Nebraska Silver Jackets website ([floods.dnr.nebraska.gov](http://floods.dnr.nebraska.gov)) offers families and communities useful tips in flood preparation under the "preparing before a flood" tab.

On the website are links to various smart phone apps, website resources, and federal agency resources for alert information. Floodplain managers may find these helpful as well.



**Photo 3. A naïve driver attempts a dangerous crossing through floodwaters. Photo courtesy of LPSNRD.**

Lastly, spring is a good time for a reminder that people should *never* drive through floodwaters. The "turn around don't drown" campaign emphasizes that just 12 inches of moving water can carry away a small car. The photo to the left shows a naïve driver who attempted to drive through floodwaters last May near Lincoln. Floodplain administrators

and emergency managers should promote this message of "turn around don't drown" whenever possible.

## Floodplain Management Staff

Some of you might have noticed that the Floodplain Management section has had a lot of turnover in the past few years. For this edition of *Floodplain Management Today*, we wanted to introduce you to everyone who works in the section and give you an idea of everyone's roles. Hopefully this will help our floodplain administrators and other stakeholders know who to contact.

### **Katie Ringland, PE, CFM** – *Chief, Mapping Project Manager & Engineer*

Katie Ringland has been a Water Resources Engineer with the department since July 2010. Prior to her experience at NeDNR, Katie worked as an engineering consultant in the fields of water, wastewater and water resources for over six years. Katie earned a Bachelor of Science in Civil Engineering from UNL in May of 2004.



At NeDNR, Katie is the Chief of the Floodplain Management Section and develops program goals, priorities, objectives, and guidelines and procedures. She is the Coordinating Technical Partners agreement project manager with FEMA and the grant manager for the section. Katie's other responsibilities include conducting and reviewing detailed hydrologic and hydraulic analyses, preparing flood insurance studies, presenting at outreach meetings, and providing technical assistance to state and local authorities.

### **Mitch Paine, CFM** – *Flood Mitigation & State NFIP Coordinator*



Mitch Paine has been with NeDNR since August 2013. Prior to NeDNR, Mitch worked for the City of Lincoln for 2 years and the World Bank, in Washington, DC. He has worked on urban planning, energy efficiency, international development, and waste management issues. He earned a Master of Regional Planning from Cornell University and a Bachelor of Science in Economics from UNL.

Mitch is the Flood Mitigation and State National Flood Insurance Program Coordinator for NeDNR. He works with Chuck on NFIP tasks and also manages the Flood Mitigation Assistance grant that communities can apply for. He works on a wide range of topics including floodplain management, flood insurance, local ordinances, the Community Rating System, mitigation grants and projects, special outreach projects, and disaster recovery.

### **Jamie Reinke, PE, CFM** – *Mapping Project Manager & Engineer*

Jamie Reinke joined NeDNR in March 2016 as a Water Resources Engineer in the Floodplain Management Section. Jamie spent the previous four years at the Nebraska Department of Roads in the Bridge Hydraulics Section completing hydrologic and hydraulic analyses for bridge design, performing hydrologic and hydraulic project review and consultant coordination. Jamie was also responsible for managing the NDOR Bridge Division floodplain management program. Prior to her experience at NDOR, Jamie has over six years of experience with engineering consultants. Jamie



holds a Bachelor of Science in Civil Engineering from UNL and graduated in December of 2005.

At NeDNR, Jamie is the Mapping Project Engineer and her main duties will include conducting and reviewing detailed hydrologic and hydraulic analyses, overseeing floodplain management staff, preparing flood insurance studies, presenting at outreach meetings, and working on other floodplain mapping projects. Jamie also provides Base Flood Elevation (BFE) determinations to federal, state, and local authorities.

**Chuck Chase, CFM – Outreach Coordinator & NFIP Specialist**



Chuck Chase is the Outreach Coordinator and NFIP Specialist for the floodplain section of the Nebraska Department of Natural Resources. Chuck is a retired Coast Guard Chief and formerly an Exercise Training Officer for the Nebraska Emergency Management Agency. He has a Bachelor of Science degree in Education from Peru State College and a Master of Science degree from the National Graduate School in Falmouth, Massachusetts.

At NeDNR, Chuck schedules training and outreach programs and helps local communities through information sharing visits such as formal Community Assistance Visits and the less formal Community Assistance Contacts. Chuck also answers phone calls and emails from communities helping them with their local ordinances, floodplain management, and other topics as needed.

**Stefan Schaepe, EI, CFM - Engineer**

Stefan Schaepe joined the Floodplain Management team as an Engineer in January of 2015. Stefan completed both his Bachelor of Science and Master of Science in Civil engineering with an emphasis in water resources from UNL in May of 2013 and May of 2015, respectively. Stefan primarily works to conduct hydrologic and hydraulic analyses for enhanced floodplain studies. He is currently working on a new floodplain study for the city of Aurora. Stefan also conducts Base Flood Elevation (BFE) determinations as requested by federal, state and local authorities.



**Ryan Werner – Floodplain Mapping Specialist**



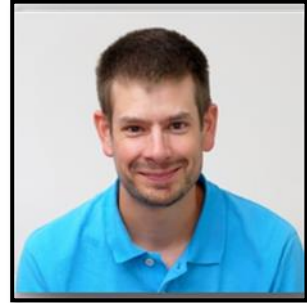
Ryan Werner has worked with the Department of Natural Resources since July 2014. Ryan has a Bachelor of Science in Geology from UNL. In his time with department, he has served in both the Integrated Water Management and Engineering Programs and Services divisions. In his current role as Floodplain Mapping Specialist, he is heavily involved in floodplain mapping projects involving the use of GIS and the development of interactive GIS applications.

Ryan maintains NeDNR’s Floodplain interactive map, and answers community requests involving technical data, as well as conducting approximate hydraulic and hydrologic analyses for BFE requests and mapping, delineating floodplains, submitting final

projects through FEMA's Mapping Information Portal, processing large spatial datasets and maintaining databases, and other general floodplain management tasks as necessary.

**Ryan Johnson** – *Floodplain Mapping Specialist*

Ryan Johnson started working with the department in August of 2014. Ryan initially worked as a temporary employee for the floodplain section and then worked with the Dam Safety section. In September of 2015, Ryan was hired back by the floodplain section as a Floodplain Mapping Specialist. Before coming to NeDNR, Ryan obtained an associate's degree in computer aided drafting and worked for civil engineering firms for 6 years. Ryan also obtained a Bachelor of Science degree in Fisheries and Wildlife from UNL and worked for the Nebraska Forest Service and the Nebraska Game and Parks Commission.



For NeDNR, Ryan conducts approximate hydrologic and hydraulic analyses for BFE requests and mapping, delineates floodplains, and creates Digital Flood Insurance Rate Maps, DFIRM databases, metadata based on FEMA's guidelines and is responsible for submissions through FEMA's Mapping Information Platform. Ryan also maintains NeDNR's Floodplain geodatabase, answers community requests for technical data, assists with outreach events, and presents at outreach meetings.

**Emily Brede** – *Outreach Specialist*



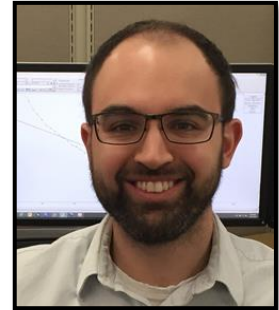
Emily Brede joined the NeDNR with the Floodplain Management Section in September of 2015 as a temporary employee and joined as a full time employee in March of 2016. Emily received her Bachelor of Landscape Architecture degree from Iowa State University in 2009 with a minor in Digital Media focusing on GIS. Her previous career experience includes work with the Iowa DNR, streambank stabilization/restoration, canoe and boat access design, native riparian plantings, grant writing, Iowa Scenic Byway Coordinator, and working with communities and stakeholders on local natural resources projects.

At the NeDNR, Emily specializes and assists with floodplain mapping, creating Digital Flood Insurance Rate Maps, DFIRM databases, metadata and submissions based on FEMA's guidelines. She also works with answering community requests for technical data, keeping community databases up-to-date, preparing visuals for outreach activities, and working on special CTP projects and others as needed.



**Jared Ashton, EI - Engineer**

Jared Ashton graduated from the UNL in May of 2012 with a Bachelor of Science Degree in Civil Engineering. After graduation, Jared worked in the Bridge Hydraulics Section of the Nebraska Department of Roads where he performed hydrologic and hydraulic analyses for bridge design, including the use of 2D modeling. Jared also verified projects met regulatory requirements as part of NDOR's Floodplain Management Program. Jared joined the Floodplain Management team at NeDNR in late March 2016 and works on conducting hydrologic and hydraulic analyses for floodplain studies, as well as determining Base Flood Elevations for federal, state, and local authorities.

**Holly Adams – Floodplain Mapping Assistant**

Holly graduated from UNL in May 2011, with a degree in Fisheries and Wildlife with an emphasis in Conservation Biology. Following college she worked for UNL surveying fishermen at lakes outside of Lincoln, NE. In 2013, Holly started working for Nebraska Game and Parks Commission where she worked on the Missouri River researching pallid sturgeon, an endangered fish species. Holly started working for NeDNR's Floodplain Section September 2015, as a Natural Resources Specialist. She works on delineating floodplains as well as creating Digital Flood Insurance Rate Maps, DFIRM databases, metadata, and FEMA submissions. She also maintains

NeDNR's Floodplain geodatabase and answers community requests for technical data.

### **Mark Your Calendar**

If you have questions about any of these opportunities, please contact Chuck Chase or Mitch Paine.

#### **National Flood Insurance Program Training Videos**

NFIP Training courses for insurance agents, claims adjusters, surveyors and community officials are being offered through the FEMA Emergency Management Institute (EMI) Independent Study (IS) Program. IS courses are open and free to anyone. Floodplain administrators may find these videos helpful.

The Independent Study catalog is available at <http://training.fema.gov/is/crslist.aspx> . Course exams require a FEMA Student Identification (SID) Number, which can be obtained at <https://cdp.dhs.gov/femasid> .

#### **Emergency Management Institute**

Multiple Emergency Management Institute courses will be offered at the Emmitsburg, MD campus (free course and transportation for community officials):

- *E273 Managing Floodplain Development Through the NFIP*: June 27-30
- *E278 NFIP/Community Rating System*: July 18-21, September 19-22
- *E282 Advanced Floodplain Management Concepts II*: July 11-14
- *E284 Advanced Floodplain Management Concepts III*: August 29 – September 1

Visit <http://training.fema.gov/EMICourses/> for more information.



Nebraska Department of Natural Resources  
301 Centennial Mall South, 4<sup>th</sup> Floor  
P.O. Box 94676  
Lincoln, NE 68509-4676  
29-01-00



## **WANT MORE INFORMATION?**



Visit DNR's Floodplain Website at  
<http://dnr.nebraska.gov/fpm>

### **Or Contact**

**Katie Ringland, PE, CFM**, Floodplain Chief & Engineer: Engineering, Mapping, and BFEs, 402.471.2094  
**Mitch Paine, CFM**, Flood Mitigation & State NFIP Coordinator: NFIP, Mitigation, and CRS, 402.471.9252  
**Jamie Reinke, PE, CFM**, Mapping Project Manager & Engineer: Engineering, Mapping, and BFEs, 402.471.3957  
**Chuck Chase, CFM**, NFIP & Outreach Specialist: NFIP and Outreach, 402.471.9422  
**Stefan Schaepe, EI, CFM**, Engineer: Engineering and Mapping, 402.471.0644  
**Jared Ashton, EI**, Engineer: Engineering and Mapping, 402.471.0500  
**Ryan Johnson**, Floodplain Mapping Specialist: Mapping, 402.471.1221  
**Ryan Werner**, Floodplain Mapping Specialist: Mapping, 402.471.3941  
**Emily Brede**, Outreach Specialist: Mapping, 402.471.8608  
**Shuhai Zheng, Ph.D., PE, CFM**, Engineering Programs and Services Division Head, 402.471.3936

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