

View Flooding in Real Time Across Nebraska

By Stefan Schaepe, PE, CFM

In response to the 2019 flood event that plagued Nebraska, NeDNR has been in the process of developing the Nebraska Real-Time Flood Forecasting (NeRFF) interactive map to assist state and local officials, as well as private citizens in the event of imminent flooding. NeRFF will provide a platform for users to view pre-calculated flood inundation boundaries and depths, in real time. Inundation and depth data will be available at 47 gage site locations, covering 54 communities across the state. For each site, inundation and depth data will be available for every half foot stream stage interval. Additionally, current and forecasted river stages provided by the National

Weather Service will be displayed on the map for all active stream gages across the state. Additional data, such as weather radar, dams, levees, weather alerts and critical infrastructure will also be features of the map. This combination of data in one site will allow communities and citizens to quickly make informed decisions about the risks flooding poses to their lives and property.

In March of 2023, the NeDNR soft launched the NeRFF interactive map, by sharing it with a select group of communities for which flood inundation data was available. The NeDNR has continued to share the site with communities as their inundation

boundaries have been developed. The pre-calculated boundaries for all 54 communities are nearly complete, and the site is planned to fully launch in September of this year. The interactive map will be a living site, with the NeDNR continuing to produce inundation and depth data for additional communities across the state every year. ■

INSIDE THIS ISSUE:

- 2 [Nebraska's Business Plan](#)
- 3 [Flood Risks Increase After Fires](#)
- 5 [Training and Events](#)

Biodiversity Spotlight: Eastern Black Rail

Little is known about the range and habits of this secretive marsh bird that amiably calls out on spring nights, "kick-e-e-kerr" which [can be heard here](#).

The Eastern Black Rail is a federally threatened and state listed species. Its home is in the wetlands, where it nests on piles of wetland grasses and probes for small invertebrates.

An elusive bird, the tiny Black Rail is extremely hard to spot. It is believed that these migrating birds may breed in southeast Nebraska. Their breeding habitat is ephemeral, often located where livestock grazing or wetland modification occurs.

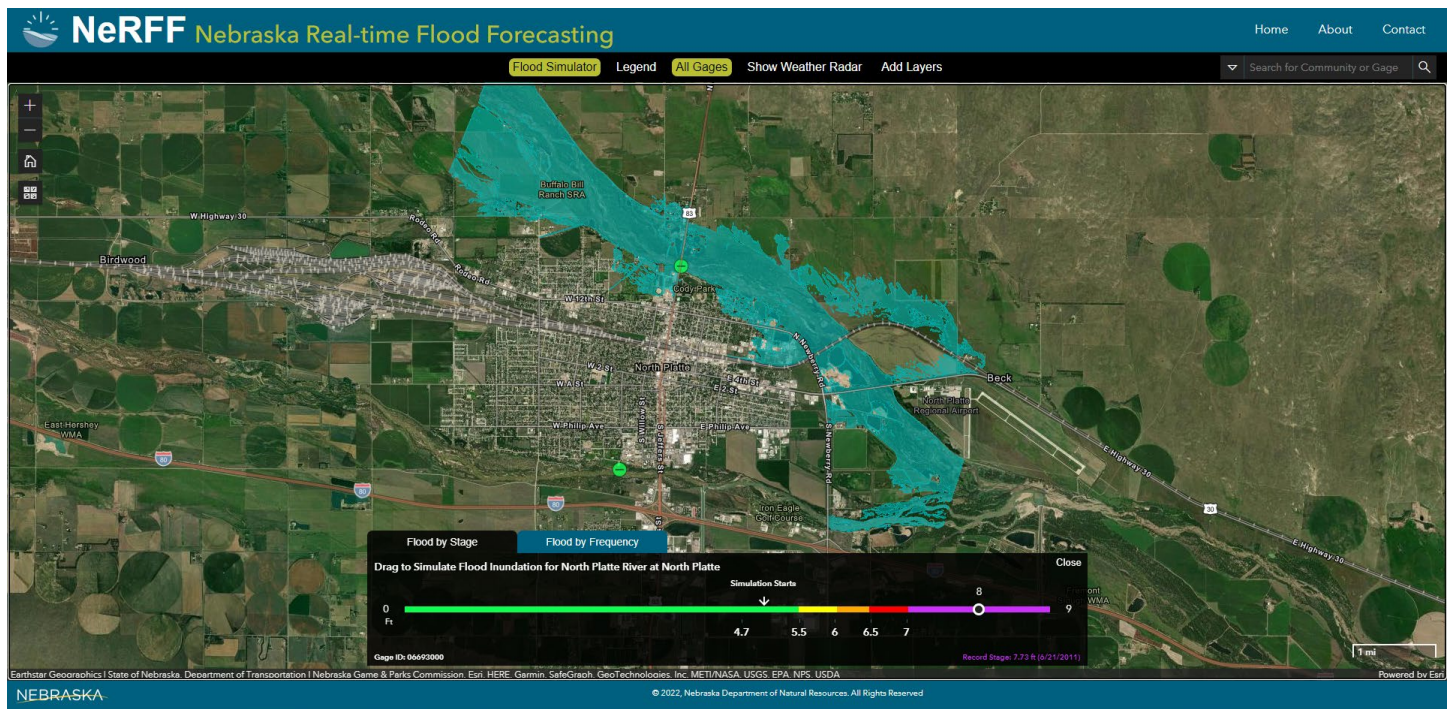
A trail camera caught this rare glimpse of an eastern black rail with six chicks. Photo: South Carolina Department of Natural Resources.

What can you do to help? Holistic floodplain management, such as allowing rivers to perform their natural floodplain functions, limiting development in flood risk areas, and protecting against wetland destruction, helps protect the habitat of this charming species. ■



Photo: Scott Bowers / Audubon





A screen capture of the Nebraska Real-time Flood Forecasting map showing simulated flooding at stage 8.

Nebraska's Business Plan

By Jamie Reinke, PE, CFM

As part of NeDNR's Cooperating Technical Partners (CTP) agreement with FEMA, the Floodplain Management team is tasked with developing a vision for mapping priorities for several years into the future. NeDNR and FEMA have separate mechanisms for how projects are selected, but often the mapping priorities of the two agencies are well aligned.

NeDNR, by state statute, prioritizes mapping needs by considering the following factors:

1. Potential for future development
2. Potential for flood damage or loss of life
3. Probability that adequate data and maps will be prepared within a reasonable time by other sources
4. Availability and adequacy of any existing maps
5. Availability of flood data and other information necessary to produce adequate maps
6. Degree of interest shown by the local governments in the area in utilizing flood data and maps in an effective floodplain management program.

Similarly, FEMA has identified the following types of projects as the highest priority:

1. On-hold County Wide Projects
2. Levee Physical Map Reduction (PMR) Projects
3. On-going Watershed Projects
4. Watershed Projects
5. Paper Inventory Reduction Projects
6. Two-Dimensional Base Level Engineering (2D BLE) Projects

NeDNR uses the data associated with regulatory maps throughout the state often, whether for Base Flood Elevation (BFE) Determinations or for providing technical assistance to communities. It often becomes clear when using the data which areas of the state need updated regulatory mapping, however, we are still required to consider the state statutes and FEMA's priorities before identifying a project for future funding.

NeDNR works to sequence projects in our business plan in a logical manner to address these mapping needs. Projects are selected at a watershed level and, when possible, NeDNR is leveraging the work of other agencies to avoid overlapping efforts

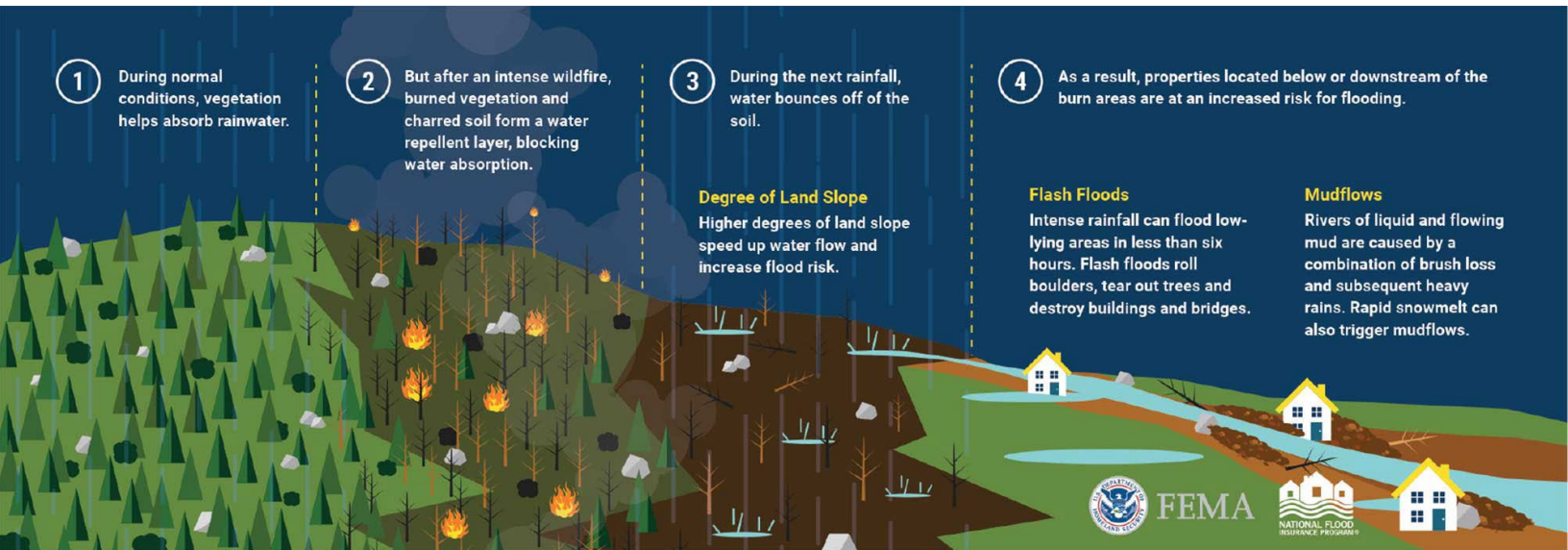
and to maintain cost-efficiency. This allows NeDNR to maximize funding opportunities to provide more of the state with updated, high-quality regulatory products.

The FEMA Fiscal Year 2023 Business Plan update was due in March. Due to changes in FEMA's priorities and NeDNR workload and staffing issues, there were significant changes to NeDNR's Business Plan last year and you will, again, see the projects that were descoped sequenced in this year's Business Plan. A significant change this year is the addition of large scale 2-Dimensional (2D) engineering studies. These studies will be used as Best Available data at first and then will be converted into regulatory products in the future as funding and opportunity permits. The Business Plan identifies 2D studies beginning in Fiscal Year 2023, which begins October 1, 2023. To view changes to NeDNR's future mapping project sequencing please view the current Fiscal Year 2023 business plan [here](#).

Questions or comments can be directed to Jamie Reinke at Jamie.Reinke@nebraska.gov. ■

Flood Risks Increase After Fires

Large-scale wildfires dramatically alter the terrain and ground conditions. Normally, vegetation absorbs rainfall, reducing runoff. However, wildfires leave the ground charred, barren, and unable to absorb water, creating conditions ripe for flash flooding and mudflow.



Flood After Fire: The Increased Risk

Floods are the most common and costly natural hazard in the nation. Whether caused by heavy rain, thunderstorms, or winter storms, the results of [flooding](#) can be devastating. While some floods develop over time, flash floods—particularly common after wildfires—can occur within minutes after the onset of a rainstorm. Even areas that are not traditionally flood-prone are at risk, due to changes to the landscape caused by fire. Residents need to protect their homes and personal property with flood insurance **now**—before a weather event occurs and it’s too late.

Flood risk remains significantly higher until vegetation is restored – up to 5 years after a wildfire. Flooding and flood damage after fire is often more severe, as debris and ash left from the fire can form mudflows. As rainwater moves across charred and barren ground, it can also pick up soil and sediment and carry it in a stream of floodwaters. This can cause more significant damage. Residents and business owners are urged to purchase flood insurance **now** to assure financial protection from flooding.

Reduce Your Risk

A flood does not have to be a catastrophic event to bring high out-of-pocket costs, and you do not have to live in a high-risk flood area to suffer flood damage. In fact, from 2014 to 2018, policyholders outside of high-risk flood areas filed over 40% of all NFIP flood insurance claims and required one-third of federal disaster assistance for flooding. Property owners should remember to:

- **Buy Flood Insurance.** Most standard homeowner policies do not cover flood damage. Flood insurance protects your investment and provides peace of mind. Talk to your insurance agent about the National Flood Insurance Program’s low-cost options.

Reduce Your Risk Continued

- **Prepare Now.** Gather supplies in case of a storm, strengthen your home against damage, and review your insurance coverages. No flood insurance? Remember: it typically takes 30 days for a new flood insurance policy to go into effect, so get your policy now.
- **Plan Ahead.** Plan evacuation routes. Keep important papers in a safe, waterproof place. Conduct a home inventory; itemize and take pictures of possessions and the inside and outside of your home.

Quick NFIP Facts

By law, there is generally a 30-day waiting period from the date of purchase until flood insurance coverage takes effect with very few exceptions.

Referred to as the Post-Wildfire Exception¹, the standard 30-day waiting period does not apply to new policies if, at the time of your flood loss, all of the following criteria are met:

1. The covered property experiences damage caused by flood that originated on federal land; and
2. Post-wildfire conditions on federal land caused or worsened the flooding; and
3. The policyholder purchased the policy either:
 - (a) Before the fire containment date; or
 - (b) During the 60-calendar-day period following the fire containment date.

For purposes of the Post-Wildfire Exception, the federal agency responsible for the land on which the post-wildfire conditions existed determines the fire containment date.

The Post-Wildfire Exception of the 30-day waiting period is determined on a case-by-case basis at the time of loss using the above criteria.



YOUR SUGGESTIONS WELCOME!

What common permitting situations you have experienced in your community and would like to see discussed in the NeDNR Floodplain newsletter? Please send suggestions to Adele Phillips at Adele.Phillips@Nebraska.gov

Research has shown that stream watersheds can show increased stream flows for about six years following large wildfires. The image above shows a Montana stream post wildfire and denuded of vegetation that would otherwise sequester and slow floodwater. Photo: Montana Free Press

Training and Events

08.17 □

Before and After Disaster Strikes: Substantial Damage 101

1:30 PM - 3:30 PM

Join NeDNR staff for an informative 2-hour virtual class on what to do before and after a disaster strikes in your SFHA. The class will cover the following topics, and more: pre-disaster preparation actions and planning, informing the public, what to do when a building is damaged, permitting requirements and substantial damage. This free class is suitable for both novice and seasoned floodplain administrators, as well as anyone interested in floodplain management. This class is approved for Continuing Education Credits (CECs) for Certified Floodplain Managers (CFMs) and Nebraska County/Municipality Treasurers of communities that participate in the National Flood Insurance Program (NFIP). To learn more and to register, visit this [link](#).

08.28 □

A Guide to Writing Proper Floodplain Development Permits

11:30 AM - 12:30 PM

Join Missouri State Emergency Management Agency staff during a lunch and learn about floodplain development permits. 1 CEC available for CFMs. To learn more and to register, visit this [link](#).

08.22 - 08.23 ■

Critical Infrastructure Resilience and Community Lifelines MGT-414 ICS Training

Grand Island, NE

8:00 AM - 5:00 PM

In this course participants will learn how to develop a road map for progress toward the National Preparedness Goal by facilitating the development of resilience considerations and involving essential community critical infrastructure partners. Participants will learn how to formulate considerations for the resilience of community assets that leverage cross-sector partnerships. These considerations enhance the whole community's ability to manage the risk associated with critical infrastructure protection efforts. Participants will have an opportunity to practice the practical skills necessary to formulate considerations in the local community. For more information and to register, please visit this [link](#).

09.12 □

Violations and Enforcement

1:30 PM

The Kansas Department of Agriculture is offering a free virtual training designed for floodplain managers and community officials responsible for enforcing floodplain management regulations. This course will focus on investigating alleged violations, sending notices to property owners, and meeting with violators to resolve matters. This class is approved for 2 CECs toward the CFM credential. To learn more and to register, visit this [link](#).

08.24 ■

Critical Asset Risk Management MGT-315 ICS Training

Grand Island, NE

8:00 AM - 5:00 PM

The Critical Asset Risk Management course teaches the critical components of risk management and provides participants the basic fundamentals of determining and mitigating risks associated with their critical infrastructure. Through a combination of lecture, facilitated discussion, and group activities, participants will learn how threats, vulnerabilities, and consequences determine risk and are given an opportunity to practice the fundamentals of conducting vulnerability assessments by conducting on-site assessments of select local facilities. Additionally, they will identify potential mitigation measures associated with their findings and work together to develop and present a risk assessment report. To learn more and to register, visit this [link](#).

09.28 □

Preparing for Post- Disaster Responsibilities

11:30 AM - 12:30 PM

Join Missouri State Emergency Management Agency staff during a lunch and learn about floodplain development permits. 1 CEC available for CFMs. To learn more and to register, visit this [link](#).

Training and Events Cont.

09.21 □
Substantial Damage Estimator (SDE) 3.0 Tool: How to Easily Prepare a Database of At-Risk Properties
 12:00 PM - 1:00 PM

The aftermath of a disaster is not a good time to learn about permitting, the floodplain program, or Substantial Damage Assessments. Join NeDNR staff for an informative 1-hour virtual class on how to easily create a database of at-risk properties before a disaster occurs. The class will cover the following topics, and more: Review of the SDE 3.0 Tool for post-disaster support, tips to make data input even easier, how to upload multiple properties from the County Assessor, and benefits of the database for your other NFIP responsibilities. This free class is suitable for both novice and seasoned floodplain administrators, as well as anyone interested in floodplain management. 1 CEC available for eligible CFMs and Nebraska NFIP community treasurers. To learn more and to register, visit this [link](#).

10.12 ■
Floodplain Administration Workshop
 Alliance, NE
 8:30 AM - 5:00 PM

NeDNR will present an in-person workshop covering the fundamentals of floodplain management. The topics include floodplain development permits, map reading, LOMAs and LOMR-Fs, substantial damage and improvement, and more. This FREE workshop is suitable for both novice and seasoned floodplain administrators, as well as any community members responsible for local floodplain administration. If you are a CFM, or a Nebraska County/ Municipality Treasurer of a community that participates in the NFIP the workshop is approved for CECs toward your credential.

FEMA will fund a limited number of scholarships to attend the event. Funds may reimburse for hotel, mileage, and meal expenses for Nebraska. To learn more, visit this [link](#).

Self-Paced □
NFIP 101: Introduction to Floodplain Management
 12:00 PM - 1:00 PM

FEMA’s Floodplain Management Training, Education, and Development Committee has launched a new online NFIP 101 course. This training is hosted in partnership with the Association of State Floodplain Managers (ASFPM) and will help new and experienced floodplain administrators, emergency managers, elected officials, and others learn more about the NFIP and its requirements. The course is free and **does not require** ASFPM membership.

The self-paced course will take about 14-18 hours to complete. There is no time limit, so you can finish the course over days, weeks, or months. Those new to floodplain management who wish to learn the basics and earn professional credit may complete an exam and, if passed, receive 12 CECs from ASFPM. The course is also useful as a reference guide for more experienced floodplain administrators who are seeking a refresher on basic floodplain management tools, terms, and concepts. To learn more, visit this [link](#).

August

Su	M	Tu	W	Th	F	Sa
				.17		
		.22	.23	.24		
	.28					

September

Su	M	Tu	W	Th	F	Sa
		.12				
				.21		
				.28		

October

Su	M	Tu	W	Th	F	Sa
				.12		

Want More Information?

Visit the NeDNR Floodplain Management website at: <https://dnr.nebraska.gov/floodplain>

Check out our Interactive Floodplain map at: <http://ne.gov/go/floodriskmap>

Contact:

Jamie Reinke, PE, CFM	Section Leader, Interim State NFIP Coordinator	(402) 471-3957
Adele Phillips, CFM	Floodplain Mitigation Planner	(402) 471-9252
Chuck Chase, CFM	NFIP & Outreach Specialist	(402) 471-9422
Elijah Kaufman, CFM	NFIP & Mitigation Specialist	(402) 471-0640
Jared Ashton, PE, CFM	Project Engineer	(402) 471-0500
Stefan Schaepe, PE, CFM	Project Engineer	(402) 471-0644
Deanna Ringenberg, PE, CFM	Project Engineer	(402) 471-1221
Jeehoon Kim, CFM	Floodplain Mapping Specialist	(402) 471-1223
Ryan Stastny, CFM	Floodplain Mapping Specialist	(402) 471-2243
Karl Merchant	Floodplain Mapping Specialist	(402) 471-2240
Harrison Jones	Floodplain Mapping Specialist	(402) 471-2242
Rebecca Podariu, EI	Engineer	(402) 471-0307
Asa Brayton, CFM	Outreach Specialist	(402) 471-0572
Michele York	Administrative Assistant	(402) 471-1214
Shuhai Zheng, Ph.D., PE, CFM	Division Head, Engineering Programs & Services	(402) 471-3936

This newsletter is produced by the NeDNR Floodplain Management Section and is partially supported by funding through a Cooperative Agreement with the Federal Emergency Management Agency. The contents do not necessarily reflect the view and policies of the federal government.