



# Nebraska Department of Natural Resources

## Floodplain Management for Local Officials



May 2003

The Nebraska Department of Natural Resources newsletter is published through assistance provided by FEMA under the Community Assistance Program – State Support Service Elements of the National Flood Insurance Program. The contents do not necessarily reflect the views and policies of the federal government.

## Web-based FIRMs Available

FEMA has established a web-based application that can be used, free of charge, to access flood hazard information at

<http://www.FEMA.GOV>. The website offers this service through the FEMA Flood Map Store.

The following steps will guide you through the process of downloading a floodplain map to your computer.

- On the entry page, a series of dark blue tabs extend down the left side of the screen. Near the bottom, *select* “**FEMA Flood Map Store**” to access to the site.
- The store offers Customer Log In, News and Updates, and Three Ways to Get Maps. Log In is not necessary. Go to the shaded panel on the right side of the screen and *select* “**Map Search**” from the list. Selecting this link will install a short program to run the search tool used for this application.
- After the tool is loaded, you have the application “**MSC Product Map Search**” on your screen. Information can be retrieved by either entering an address location in the boxes across the top of the screen, or by zooming to an area on the map with your mouse. The address search works well within communities, the zoom to location will work best in rural areas.
- This search produces a Search Result Page that lists the Map Identification Number, Description, Effective Date, and Cost for hard copy/CD/ or On-line purchase. (To download a copy of a map, you do not need to pay). *Select the Green “VIEW”* button to proceed (**AT NO COST TO YOU**).

By selecting “VIEW” you are taken to the “**MSC Digital Post Office**” and provided with the Flood Insurance Rate Map (FIRM) panel for the site

you have selected. A downloadable copy of a portion of this map can be made by *selecting* the “**Make a FIRMette**” tab on the bottom/left of the screen. The edit tool provides a RED box that can be moved to a selected portion of the map with your mouse. If the green areas on the map legend are incorrectly positioned, they can be selected and moved as well. When you have selected the areas that you wish to copy, *select* either button on the lower/left side of the screen to **download a PDF or TIF** graphic image to your hard drive.

These files are “official” maps for flood insurance and floodplain management purposes. They provide a convenient map to provide to customers, or to use as supporting documentation for your files.

Flood Boundary and Floodway Maps (FBFM) and Flood Insurance Studies (FIS) are also available in PDF format. Contact NDNR for additional information.

## Map Changes May Affect Loans

FEMA frequently revises flood hazard maps. Map changes have implications for lenders, borrowers, real estate agents, and insurance agents. Lenders and real estate agents who are relatively new to the flood insurance business may need more information to know how to best serve their clients.

Insurance agents and Write Your Own (WYO) companies may have more experience in anticipating map changes, but there are proactive ways everyone can prepare for them:

- Look for Legal Notices in local newspapers. FEMA’s Regional offices use news publications to give notice of map changes;

- Find information about changes on-line at the FEMA Map Service Center website (<http://web1.msc.fema.gov>);
- Contact local community officials for map change information that will affect your customers;
- The NFIP Compendium of Flood Map Changes can be found in the mitigation section of the NFIP website ([www.fema.gov/mit/tsd/dl\\_comp.html](http://www.fema.gov/mit/tsd/dl_comp.html)).

### Change the Risk

Some property owners, who had not been subject to the mandatory flood insurance purchase requirement in the past, now might find themselves in Special Flood Hazard Areas (SFHA) due to changes in floodplain mapping. An SFHA designation on the flood map indicates that flood insurance rates for buildings in that area reflect a higher risk of loss. In SFHA, flood insurance is required on buildings in connection with loans from federally regulated lending institutions and Federal agencies and loans sold to Government Sponsored Enterprises.

NFIP “Grandfathering” rules may apply to some properties. “Grandfathering”, is defined by the NFIP. A detailed definition is located in the Flood Insurance Manual on page DEF 4.

If an insured structure has maintained continuous coverage from a date prior to the effective date of the effective FIRM with revised flood hazards, the “grandfathering” rule allows coverage to be continued at the preferential rate shown on the earlier FIRM, as long as continuous coverage is maintained. This coverage can be transferred with a change of ownership, as long as there is no lapse in coverage.

“Grandfathering” rules also apply to structures built in compliance at the time a previous FIRM was effective. (Continuous coverage would not be required in this scenario).

If a zone changes to reduce a risk level, the grandfathering rules would not hold that structure to a higher risk than indicated on the current effective FIRM.

“Grandfathering” rules do not apply to structures built prior to the date of the initial FIRM that have not maintained continuous coverage.

### Special Flood Hazard Area Designation Changes

On new FIRMs, some property owners formerly at high risk of flooding might find themselves in low to moderate risk flood areas, where mandatory purchase of flood insurance for Federally backed lending is not required.

The removal of property from a SFHA does not necessarily mean that the lender (or owner) should stop purchasing flood insurance. The flood risk has not been miraculously eliminated! More than a quarter of all flood insurance claims come from losses occurring in low to moderate risk areas. The change in designation is just that. It is simply a different way to describe the flood risk. The property may still be at risk from flooding, but now it can be insured at a lower premium cost. The NFIP’s Preferred Risk Policy (PRP) is available to structures in low risk areas. If the property has been removed from the SFHA, the lender still needs to protect the collateral.

It is important that all communications to property owners whose risk has been downgraded state that a building removed from a high-risk area on FEMA maps is still at risk from flooding. Reclassifications as a low-risk area should be great news to consumers, who will be able to protect their property at reduced premium rates. Lenders should refer borrowers to their insurance agents for assistance!

## NOTICE

The Association of State Floodplain Managers (ASFPM) is holding its annual conference in Saint Louis, Missouri during the week of May 12 through 16, 2003. DNR staff will be providing a series of technical workshops for the conference and some floodplain management staff will be out of the office most of that week.

Staff will check voice mail each day, as time allows, and we will try to respond to your needs as promptly as possible, with the limited resources we will have available.

Please be patient. Normal office hours will resume the following week.

## **New Nebraska State Coordinator at Region VII**

Pam Soper, the Nebraska State coordinator for the National Flood Insurance Program (NFIP) (FEMA Region VII) for the last three years has moved to Homeland Security Division at the regional office. Ms. Georgia Wright has been named as the new coordinator for Nebraska. Georgia is looking forward to meeting with Nebraska's floodplain managers and continuing FEMA's long-standing support of Nebraska's floodplain management programs. Georgia's contact information is listed in the CONTACTS section of this newsletter.

## **Protecting Building Utilities and Ductwork from Flood Damage**

Nebraska model ordinances and locally adopted ordinances have freeboard provisions. Nebraska Minimum Standards for Floodplain Management Programs requires the lowest floor for residential structures to be elevated to at least one foot above the Base Flood Elevation (BFE).

A problem arises when local regulatory officials focus only on the lowest floor and neglect other parts of their ordinances in which there are additional provisions required by the NFIP regulations. Sections 60.3a(3)(ii) and (iv) of the NFIP regulations require that buildings "(ii) be constructed with materials resistant to flood damage" and "be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding."

For structures in Nebraska, this means that flood-resistant materials should be used below one foot above BFE, and that building utility equipment (including ductwork) must be elevated or protected to the BFE.

In short, protecting a building from flood damage means more than elevating the lowest floor above the regulatory flood elevation. Flood insurance claims have shown that the Federal

Emergency Management Agency (FEMA) has paid a lot of money for damage to air conditioners, furnaces, ductwork, and insulation that were flooded, even though the building's lowest floor was high enough. In addition, mold, mildew, and fungus accumulating in flood-damaged air passageways often can lead to serious health issues for residents. This is primarily a concern for buildings with crawlspaces. Buildings on slab foundations normally have the utility facilities waterproofed or elevated high enough. The new FEMA elevation certificate highlights this problem. When properly completed, the surveyor must record the elevation of the "top of the bottom floor," "attached garage," and "lowest elevation of machinery and/or equipment servicing the building," among other things. If the attached garage, machinery, and equipment are not above the BFE or are not otherwise protected from flood damage, then the building is not in compliance with the NFIP regulations. What's required: Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork) must be elevated or waterproofed to the BFE.

There is no cost-effective technique for designing for ducts to keep floodwater from entering in or accumulating within the system components during inundation by floodwater. If ductwork must be installed below BFE, it should be minimized as much as possible. The material used for the duct must be impermeable and watertight, such as welded seamless ductwork or large diameter PVC pipe. Such material is very expensive but practical for cases where a short length of ductwork descends below the BFE. The water and fuel piping associated with HVAC systems must be properly protected from damage during flooding. PVC piping generally requires special consideration when used in flood-prone areas. This type of pipe is more susceptible to impact damage. In addition, because of the nature of the material, PVC sometimes fractures or shatters when exposed to the heaving and settling that structure experiences when withstanding floodwaters. If the lines are ruptured, it may result in contamination, leaking, or even fire. In general, copper and galvanized metal piping is better suited for use in floodprone areas. Note: Component protection for ductwork refers to continuous duct segments below the BFE which are watertight and terminate above the BFE. Duct

segments with openings below the BFE or that terminate below the BFE are not permitted under the NFIP. For some types of construction, it is common for ductwork to be run through the attic.

**What the community should do**

These steps are recommended to ensure that your community is fully compliant with the NFIP:

1. Review your ordinance and verify that you have clear legal authority to require elevation of ductwork and other utilities to the BFE. If in doubt, ask your community's legal counsel for a letter stating how the ordinance is to be interpreted.

2. Review your permit application and inspection procedures to determine the best way to ensure that the requirement is met. This may necessitate procedural changes such as additional information on the permit application form, additional plans provided by the applicant, an addition to a field inspection checklist, and/or a photograph for the record at the time of the final inspection.

3. Discuss the matter with local builders and architects as necessary. Feel free to use excerpts from this newsletter and from FEMA 's guidance.

4. Make sure surveyors who complete elevation certificates understand that (C.3.e) "Lowest elevation of machinery and/or equipment servicing the building," means the bottom of the lowest ductwork, air conditioning unit, or other item outside the building or below the lowest floor. Will you need to change procedures to verify compliance?

**The Nebraska Large Area Mapping Initiative**

The Nebraska Department of Natural Resources (NDNR) has developed a process for using a geographic information system (GIS) to map Approximate Zone A (1% probability) floodplains of large rural unmapped areas in Nebraska. Called the *Large Area Mapping Initiative* (LAMI), the system tries to maximize both the productivity of the mapping team and at the same time the utility of the final product. The premise of the program cannot be defined by a single computer program or calculation method, but

is instead based on the idea that there will be outstanding results when an organization is flexible enough to use any appropriate technology to put the right tool in the hands of a mapping professional. Currently, the Nebraska floodplain mapping team is delineating the 100-year floodplain at a rate of approximately 5 stream miles delineated per hour while at the same time producing most of the information necessary for the creation of the Federal Emergency Management Agency's (FEMA's) Approximate Zone A Digital-Flood Insurance Rate Map (D-FIRM) product.

This process has been coordinated with FEMA. NDNR is receiving funding from FEMA under the Cooperating Technical Partners (CTP) program to map Nebraska counties. (For additional information regarding CTP, please visit the FEMA website at:

[http://www.fema.gov/mit/tsd/ctp\\_main.htm](http://www.fema.gov/mit/tsd/ctp_main.htm).) The final mapping product complies with FEMA's *Specifications and Guidelines for Flood Hazard Mapping Partners*, and the data is compliant with the DFIRM database requirements

**FIRM Status in Nebraska**

31 Nebraska counties have no floodplain mapping at all, and are not currently contracted for mapping.

Item	Counties
Miscellaneous	Nuckolls County was mapped as a pilot study. Polk County is being mapped by the US Army Corps of Engineers using similar methods.
2000 – 2001	Dundy, Howard, Otoe, and Stanton Counties
2001 – 2002	Fillmore, Garden, Kearney, Keith, Nance, Thayer, and Thurston Counties
2002 – 2003	Boyd, Franklin, Gosper, Johnson, Knox, Pawnee, and Perkins Counties

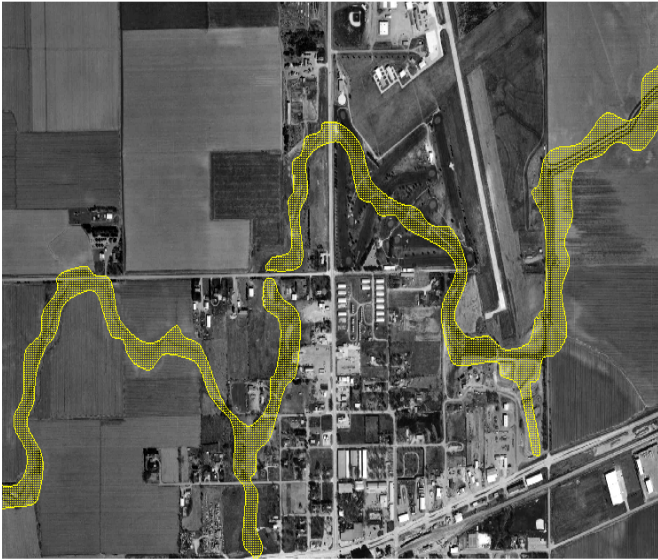
The flood zone map is in an electronic format, and may be shown against aerial photographs or topographic maps, or shown against other features.

For most purposes, plotting against an aerial photograph gives the best result. The following figure shows a portion of Minden, Nebraska, with the draft flood zone plotted on an aerial photograph.



For areas farther from town, section lines and/or section numbers are commonly plotted on the maps for orientation purposes.

Flood Zone Example



### Mapping Priorities

For more than 35 years, the Nebraska State Legislature has given NDNR (and its predecessor agency, the Natural Resources Commission) the responsibility of coordinating all aspects of floodplain management within the state. As part of that floodplain management coordination, NDNR has been responsible for mapping floodplains and coordinating mapping efforts in regions where floodplain maps are not adequate. The Legislature provided the following criteria for assessing floodplain-mapping needs:

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

NDNR will continue to map flood hazards in Nebraska based on priorities generated from these six criteria. Every Nebraska county is expected to have a countywide floodplain map by 2007. At that

time, mapping efforts will be turned toward remapping counties that have inadequate maps, based on the same criteria.

## NNRC to Host a Floodproofing Workshop

Floodproofing is defined as “*Any combination of structural or non-structural changes or adjustments incorporated in the design, construction, or alteration of individual buildings or properties that will reduce flood damages.*”

The NDNR has contracted with the *National Floodproofing Committee of the U.S. Army Corps of Engineers* to bring this seminar to Nebraska on May 21, 2003. The goal of this seminar is to educate the attendees in the area of floodproofing and to show that it is a viable alternative to mitigate flood induced damages.

### Why a Floodproofing Seminar?

Through the administration of flood damage reduction planning projects, the Nebraska Department of Natural Resources (NDNR) has realized that floodproofing is frequently a feasible mitigation alternative. However, one of the major impediments to floodproofing is the lack of widespread knowledge regarding the subject.

### Who is the National Floodproofing Committee?

The National Floodproofing Committee is a standing group of Corps employees who work with floodplain management. These employees come from various Corps offices nationwide.

The main objectives of the Floodproofing Committee area to:

- Promote the development and use of proper floodproofing techniques
- Provide a source of technical expertise on floodproofing
- Disseminate floodproofing information to state, tribal and local officials as well as the general public

Members of the National Floodproofing Committee are also active in floodplain management-related organizations such as the Association of State Floodplain Managers.

The National Floodproofing Committee holds floodproofing seminars around the country and evaluations of previous seminars

shows that they have been extremely popular and informative.

Now you have the opportunity to receive FREE training in this field, right here in Nebraska. The seminar format is informal, and attendees are encouraged to ask questions and create dialog with the presenters so that attendees will learn the most. To facilitate this, the NDNR is even providing the lunch so that attendees will be able to stay at the conference facility and ask questions of the presenters.

### **Workshop Topics**

- Elevation of Buildings
- Wet/Dry Floodproofing
- Buyout/Relocation
- Barriers and Funding Sources

**For further information or to make arrangements to attend the same workshop in central or western Nebraska next year contact Steve McMaster.** (Contact information can be found in CONTACTS section below)

222 South 15<sup>th</sup> Street  
First Floor Conference Room

- **July 31 – Lincoln**  
Continental Western Group  
Training Room (lower level)  
3641 Village Drive
- **August 5 – Kearney**  
Kearney/Buffalo County Law Enforcement Center  
2025 Ave. A (Parking North of Building)
- **August 6 – Ogallala**  
Ogallala City Hall  
City Council Chambers  
411 East Second Street
- **August 12 – Scottsbluff**  
Scottsbluff Public Library  
Conference Room  
1809 3rd Avenue

\*For additional information, contact NDNR or CSC at address/phone number listed at “Contacts” below.

## **WORKSHOPS**

For Floodplain Management Administrators,  
Lenders, Real Estate and Insurance Agents

A series of flood insurance workshops conducted by Computer Science Corporation will be held in July and August. NDNR will conduct additional floodplain management training in conjunction with these sessions. From 8 a.m. to 12:00 p.m. the insurance seminar will cover flood insurance, with emphasis toward lenders and insurance and real-estate agents. From 1:00 to 3:30 p.m., floodplain management will be discussed. Floodplain administrators are invited to attend the insurance seminars at no cost. Administrators are welcome to attend either or both sessions.

- **July 29 – South Sioux City**  
South Sioux City Fire Station  
Meeting Hall  
201 West 16<sup>th</sup> Street
- **July 30 – Omaha**  
Central Park Plaza

## **Floodplain Management CONTACTS**

### **Nebraska NDNR**

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### **FEMA Region VII**

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## **INTERNET**

- Federal Emergency Management Agency:  
<http://www.FEMA.GOV>
- Nebraska Department of Natural Resources:  
<http://www.dnr.state.ne.us>

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