



FLOODPLAIN MANAGEMENT

FOR THE CITY OF GRAND FORKS

Important Floodplain Update

This publication is being presented to you to educate and inform about floodplain management issues and updates. The City of Grand Forks has been intensely involved in floodplain management for many years. The City is now entering a new era in floodplain management. In June 2000, the cities of Grand Forks and East Grand Forks broke ground for the \$409 Million Flood protection project. With the certification and completion of this project the City of Grand Forks has now received updated maps of the flooding hazard for the community. These maps are produced by the NFIP, National Flood Insurance Program and had an effective date of December 17, 2010.

Since the City was successful in obtaining a LOMR, Letter of Map Revision in 2007, this new map will not have any or very little affect. The two maps were very close to identical. Most properties affected by this LOMR and now the new map will see a reduction in the flood threat or zone, going from a 100-year flood zone to a 500-year zone. There are properties that will still have portions located in the 100-year floodplain zone, but the structures on these properties are far enough away from the 100-year floodplain zone. Because there are several different situations created by the LOMR, the details are different under each situation and must be researched separately.

So what does this mean to property owners? For your information, maps are included in this publication, that show which properties are affected. It is important to note that this is not a change since 2007. For additional details please contact the Building Inspections Department. Most properties in the City of Grand Forks are no longer located in the most hazardous flooding zone. What this means is FEMA regulations do not require mandatory flood insurance in the 500-year zone, but a mortgage company may still require flood insurance as a condition of the mortgage. If the mortgage company indicates that they will no longer require flood insurance as a condition of the mortgage, the property owner can make the decision themselves to carry flood insurance at the lower premium rate or not to carry flood insurance at all. Keep in mind that there are other forms of flooding, such as overland flooding, that can occur after heavy rain fall, against which flood insurance can help you protect your property and belongings. If you as a property owner are still paying for flood insurance it is important that you pay the correct premium fee. Please feel free to contact the Building Inspections Department at 701-746-2631 with any and all questions regarding item and this documentation included within.

Local Flood Hazards

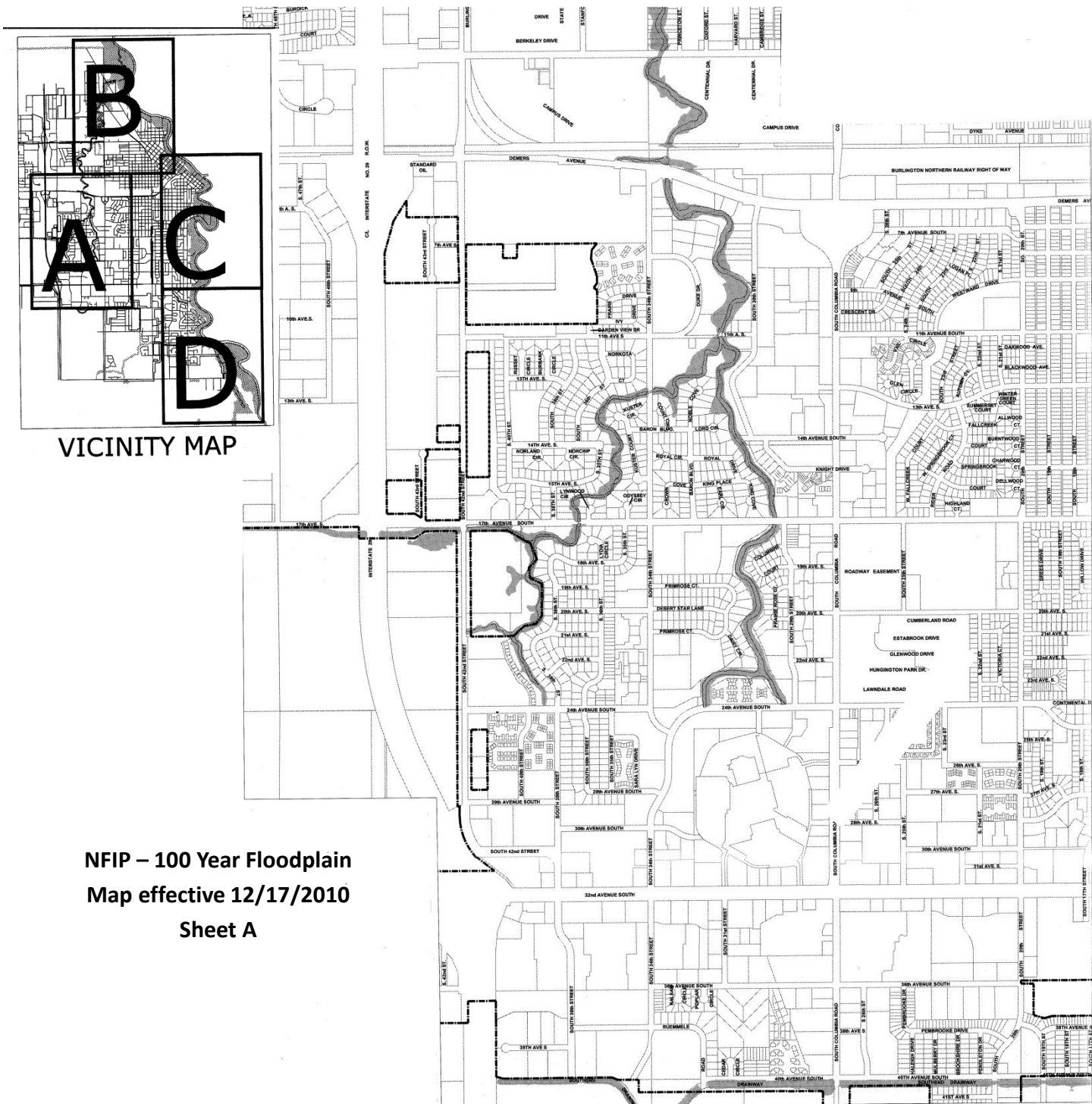
The Grand Forks-East Grand Forks urban area is located on the flat Red River of the North Dakota floodplain at the junction of the Red River of the North and the Red Lake River. Although this location met early development needs for transportation routes, power, and water supplies, it leaves residents of Grand Forks vulnerable to periodic economic losses and threats to public health and safety from floods. Existing permanent and emergency flood barriers along with non-structural measures such as flood insurance, floodplain regulations, flood forecasts and warnings, and flood proofing have reduced flood losses and threats to public health safety.

Principal factors contributing to flooding at Grand Forks include the very flat river slope; northward drainage into still frozen reaches; channel obstructions and, to some extent, increasing agricultural drainage. The area is subject to both spring snowmelt and summer thunderstorm flooding of the Red River of the North and flash flooding along the English Coulee at any time. Records of river flooding have been maintained since 1882. These measurements have been recorded by the U.S. Geological Survey gauge. This gauge has been moved several times over the years; it is presently located at river mile 297.6 just south of the Sorlie Bridge on DeMers Avenue. The bottom of the river channel at that location is river gauge 0.0 or 779.0 feet above mean sea level.

Local Flood Hazards - continued

Shortly after the flood of 1997, FEMA contacted the Corps of Engineers to evaluate flooding frequency in the Red River Valley. In 2003, the Corps produced a Regional Red River Flood Assessment Report on what the 1% (100 year) annual chance water surface elevation would be along the entire length of the Red River. For Grand Forks it was determined that our 1% (100 year) annual chance flood would change to an elevation of 832.2 (53.2 ft River Gauge). This was an increase of 1.2 ft. at the gauging station. River profiles upstream of the gauge were even greater and would have resulted in much of our community being within the 100-year floodplain. All flood protection project activities and studies have since been incorporated in the 2003 report, as the latest available information for floodplain management.

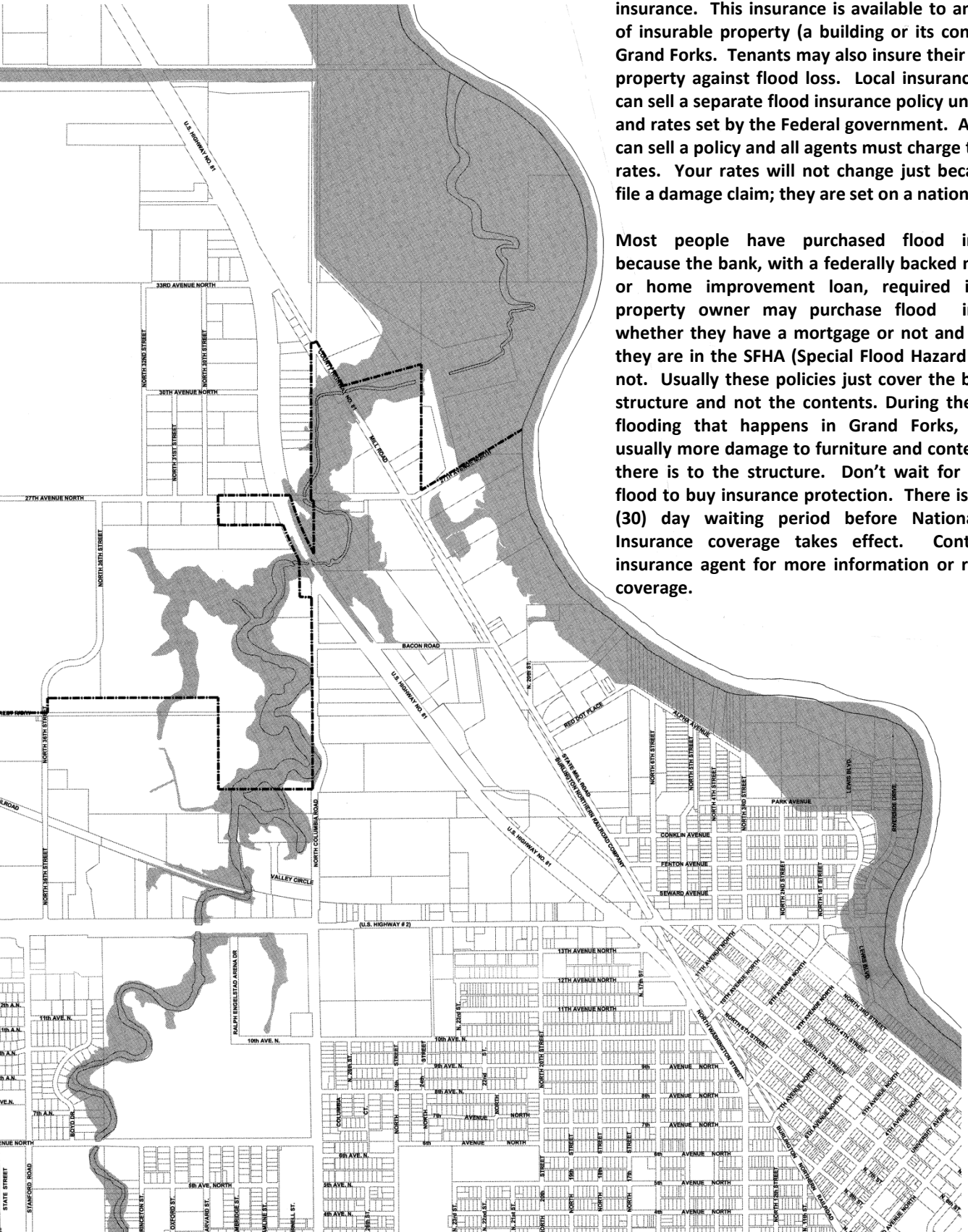
Grand Forks County, which includes the City of Grand Forks, received new FIRM maps with the effective date of December 17, 2010. These maps reflect the restudy indicated above and more accurately depict the flood hazard area. They also depict the permanent flood protection project and the reduced flood hazard to most of the City of Grand Forks. Summer thunderstorms and flash flooding are still a concern to the public, even behind the flood protection project.



Flood Insurance

Standard homeowner's insurance policies do not cover losses due to floods. However, Grand Forks is a participant in the National Flood Insurance Program, which makes it possible for Grand Forks property owners to obtain federally backed flood insurance. This insurance is available to any owner of insurable property (a building or its contents) in Grand Forks. Tenants may also insure their personal property against flood loss. Local insurance agents can sell a separate flood insurance policy under rules and rates set by the Federal government. Any agent can sell a policy and all agents must charge the same rates. Your rates will not change just because you file a damage claim; they are set on a national basis.

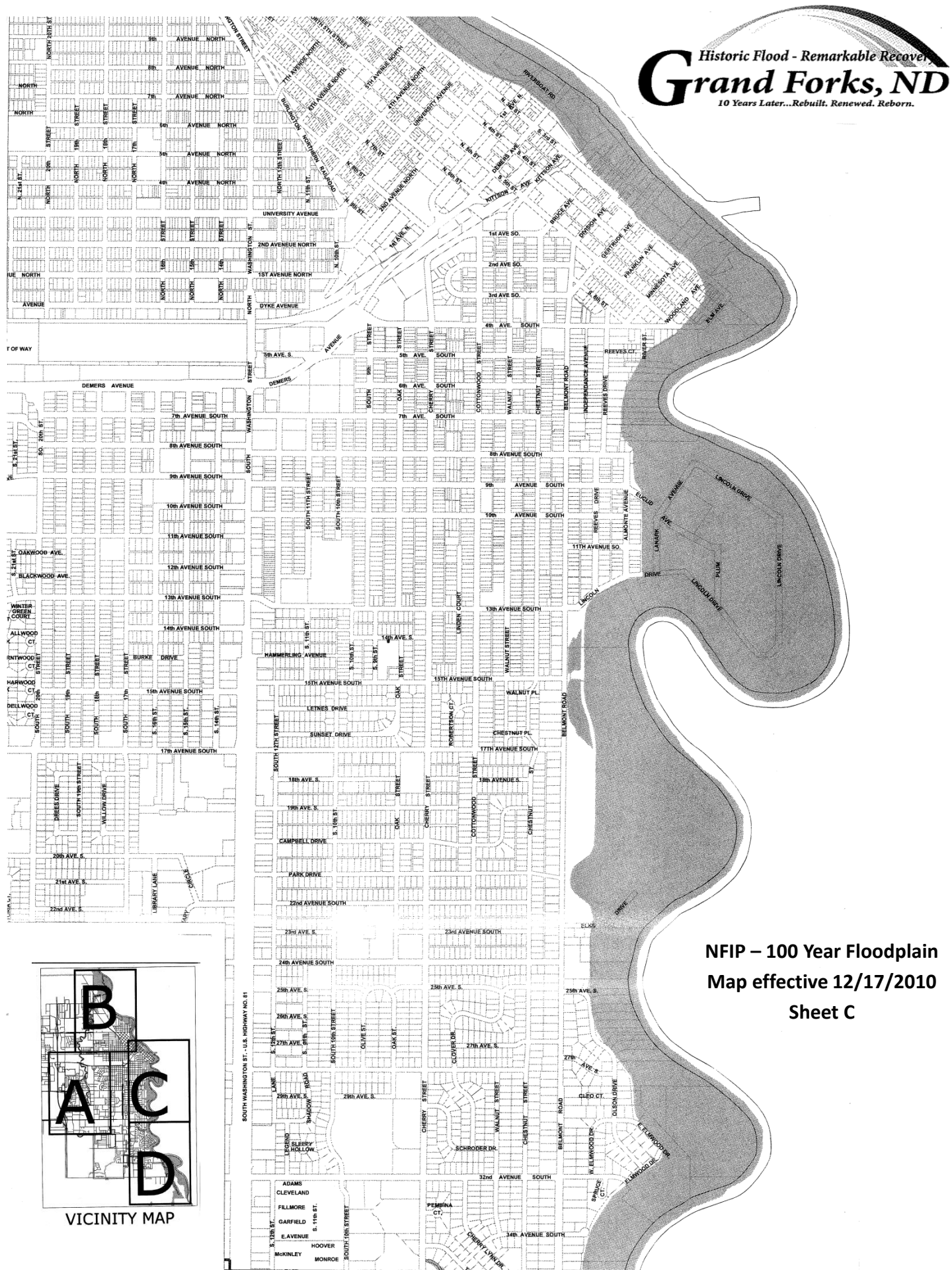
Most people have purchased flood insurance because the bank, with a federally backed mortgage or home improvement loan, required it. Any property owner may purchase flood insurance whether they have a mortgage or not and whether they are in the SFHA (Special Flood Hazard Area) or not. Usually these policies just cover the building's structure and not the contents. During the kind of flooding that happens in Grand Forks, there is usually more damage to furniture and contents than there is to the structure. Don't wait for the next flood to buy insurance protection. There is a thirty-(30) day waiting period before National Flood Insurance coverage takes effect. Contact you insurance agent for more information or rates and coverage.



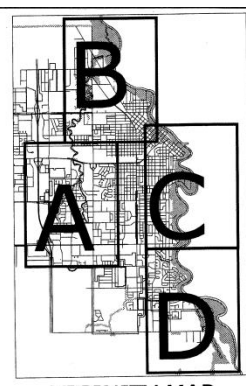
Historic Flood - Remarkable Recovery

Grand Forks, ND

10 Years Later...Rebuilt. Renewed. Reborn.



**NFIP – 100 Year Floodplain
Map effective 12/17/2010
Sheet C**

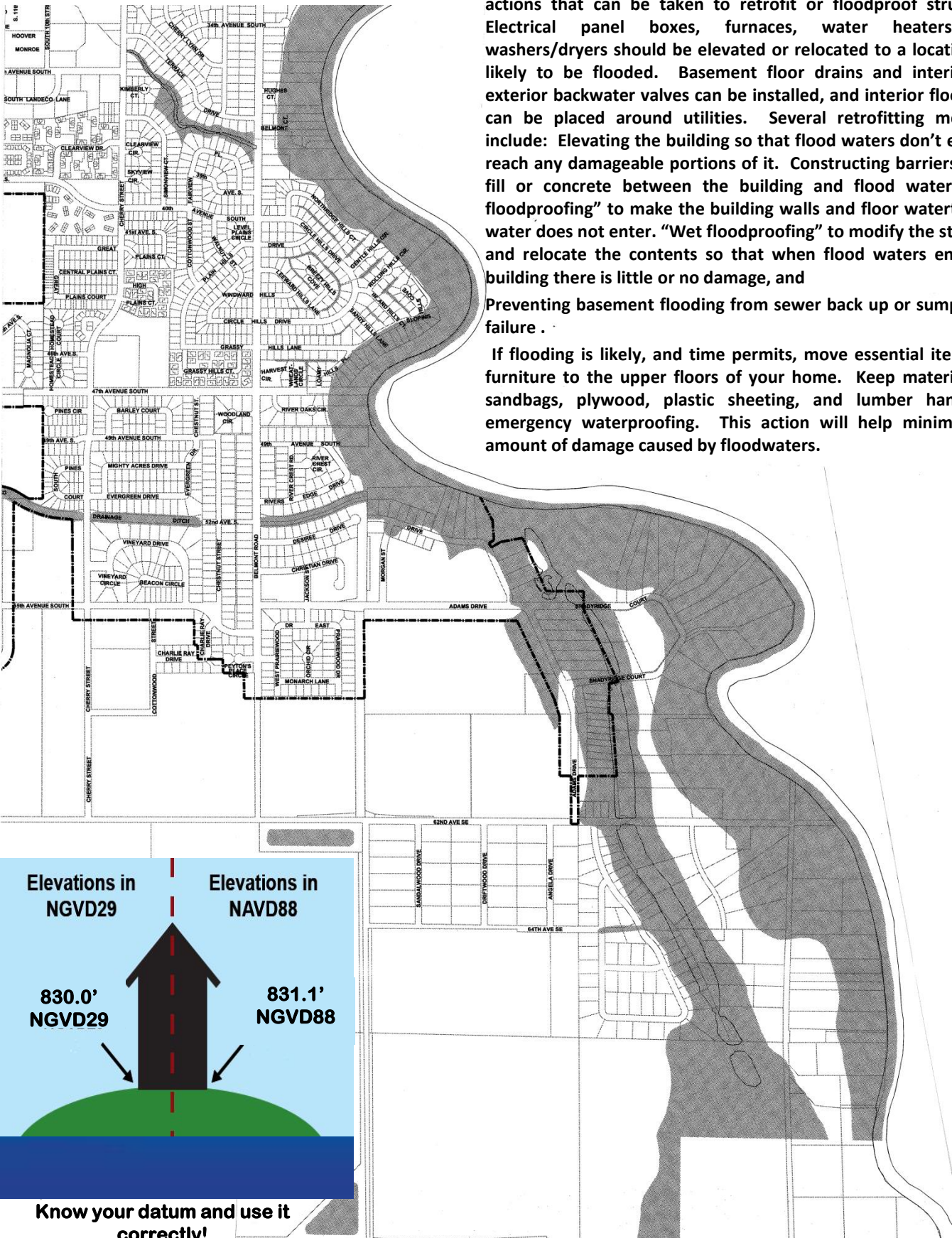


VICINITY MAP

Property Protection Measures

Rather than wait for a code requirement, you can act now to protect your property from flood damage. There are various actions that can be taken to retrofit or floodproof structures. Electrical panel boxes, furnaces, water heaters, and washers/dryers should be elevated or relocated to a location less likely to be flooded. Basement floor drains and interior and exterior backwater valves can be installed, and interior floodwalls can be placed around utilities. Several retrofitting measures include: Elevating the building so that flood waters don't enter or reach any damageable portions of it. Constructing barriers out of fill or concrete between the building and flood waters. "Dry floodproofing" to make the building walls and floor watertight so water does not enter. "Wet floodproofing" to modify the structure and relocate the contents so that when flood waters enter the building there is little or no damage, and Preventing basement flooding from sewer back up or sump pump failure .

If flooding is likely, and time permits, move essential items and furniture to the upper floors of your home. Keep materials like sandbags, plywood, plastic sheeting, and lumber handy for emergency waterproofing. This action will help minimize the amount of damage caused by floodwaters.



Elevations in
NGVD29

Elevations in
NAVD88

830.0'
NGVD29

831.1'
NGVD88

Know your datum and use it
correctly!

Flood Safety

There are several actions residents of flood hazard areas can take to decrease the potential of injury due to flooding.

Know the flood warning procedures & evacuate the flood hazard area when advised to do so.

Do not attempt to walk through a flooded area.

Keep children away from floodwaters, ditches, culverts and storm drains

Do not drive through a flooded area or around road barriers; the road may be washed out.

If your vehicle stalls in high water, abandon it immediately and seek higher ground.

Have your electricity turned off by the Power Company, cut off all electric circuits at the fuse panel, or disconnect switches. Stay away from power lines and electrical wires.

If this is not possible, turn off or disconnect all electrical appliances. Don't use appliances or motors that have gotten wet unless they have been taken apart, cleaned, and dried.

Shut off the water service and gas valves in your home. Be alert for gas leaks. Use a flashlight to inspect for damage. Don't smoke or use candles, lanterns, or open flame unless you know the gas has been turned off and the area has been ventilated.

Look before you step. After a flood, the ground and floors are covered with debris and mud and can be very slippery.

Use a generator or other gasoline-powered machine outdoors only; they can produce dangerous levels of Carbon Monoxide (CO).



NATIONAL FLOOD INSURANCE PROGRAM



Flood Warning Program

The Grand Forks Emergency Operation Plan provides comprehensive procedures for pre-flood preparations, emergency flood response, evacuation, disaster relief activities, and post-flood activities. The plan sets forth the criteria and procedures for initiating and conducting a flood response and the organizational structure and coordinated mechanisms required between all levels of government and the public. The Emergency Operation Center (EOC) provides a central location and facility for control, coordination, and communications in response to a flood emergency. The EOC is located in the basement of the police building (122 S 5th St, Room 21). It provides facilities for command/communication, functions, meetings, conferences, and prepares public information releases when the National Weather Service issues flood forecasts. The activation of the EOC will depend on the forecasted crest at Grand Forks.

Stay tuned to local radio or local TV stations and also to NOAA weather radio for information and updates on flood watches or warnings. The City of Grand Forks has an outdoor warning system that consists of sirens strategically located throughout Grand Forks. The sirens are activated to alert residents to receive the warning message by tuning into local radio or TV stations. Know the terms used to describe flooding. Flood Watch: flooding is possible. Flood Warning: flooding is occurring or will occur soon. The Emergency Management Office and Emergency Operations Center can be reached by the public at the following telephone numbers: (701)780-8213 and (701) 746-2685 respectively.

Floodplain Development Regulations

The City of Grand Forks has adopted, as part of the City Code, regulations on development in flood districts. These regulations specify two types of flood hazard areas; the floodway and the flood fringe. The 100-Year Floodplain is identified on the map included herein. The purpose of these regulations is to control the alteration of natural floodplains; prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas; restrict or prohibit uses which may result in damaging increases in erosion or in flood heights or velocities; and the control filling, grading, dredging and other development which may increase flood damages. Floodplain development permits are required for construction or substantial improvements in the flood hazard area. Uses that have a low flood damage potential and do not restrict flood flows shall be permitted in the floodway, provided they are not prohibited by another ordinance. These uses shall not require structures, fill, dumping of material or waste, or storage of materials or equipment. The most common uses of the floodway are agricultural or recreational in nature, and parking/lawn areas of residences. Flood fringe districts permit the same type uses as floodway districts. The construction of structures is also permitted, provided the lowest floor of any structure (which is the basement or the main floor is no basement is constructed) is no lower than the base flood elevation.

Natural & Beneficial Floodplain Functions

Our floodplain plays a vital role in providing natural and recreational benefits to the area. Floodplains that are relatively undisturbed, or have been restored to a nearly natural state, provide a wide range of benefits to both human and natural ecosystems. These benefits can take many forms: some provide aesthetic pleasure and others function to provide active processes, like filtering nutrients. Our community has areas of its floodplain that are in a mostly undisturbed state that serve as a natural filtration system as well as providing flood and erosion control and wildlife habitats. Several of our other floodplain areas are also being utilized for recreational purposes. New multi-use paths and parks have been developed along the river (Riverside, Central and Lincoln Dr Parks) which provide year round recreational opportunities that were previously unable in our area. Many areas in the greenway will also serve as a resource for education of the natural environment. These natural and beneficial amenities are not always easily recognized. Here is a short list of some:

- Maintain bio-diversity and the integrity of ecosystem
- Provide natural flood & erosion control and reduce flood velocities & peaks
- Create and enhance waterfowl, fish and other wildlife habitats and provide breeding and feeding grounds
- Provide floodwater storage and conveyance
- Filter nutrition and impurities from runoff
- Provide open space for aesthetic pleasure
- Provide year round recreational opportunities
- Preserve and stabilize river banks

Drainage System Maintenance

Do not dump or throw anything into the ditches, coulees, rivers or other bodies of water. Dumping is a violation of Grand Forks City Ordinances. A plugged channel cannot carry water, and when it rains, the water has to go somewhere. Every piece of trash can contribute to flooding. Even grass clippings and branches can accumulate and plug channels. If your property is next to a body of water, please do your part and keep the banks clear of brush and debris. The City has a storm drainage system that is composed of both open and closed segments. The open sections are drainage swales/ditches, which are utilized to carry storm waters away from homes to drainage areas, such as coulees or rivers. The closed system is comprised of storm water inlets and piping which also carries the water from streets and developments to drainage areas.

Maintenance of the drainage system is very important so that a high flood flow capacity can be realized. To aid in this, the City of Grand Forks clears and performs other maintenance work on the system. Work is also performed on an emergency basis. Debris in ditches obstruct the flow of water and can partially or completely fill in ditches, which can reduce the flood flow capacity and will also result in overflow onto roads and/or private property.

If you see dumping of debris in any body of water, or if you know of unapproved changes occurring to the draining system, such as filling or rerouting of streams or ditches, or a nuisance situation which exists, please contact the Building Inspections Department at (701) 746-2631.



Flood Alert



Substantial Improvement Requirements

Always check with the Building Inspection Department before you build, alter, re-grade or fill on your property. A permit is needed to ensure that projects do not cause problems on other properties. If you see construction without a City permit posted, contact the Building Inspection Department at 746-2631.

New buildings in the floodplain must be protected from flood damage. Our building code requires that new buildings constructed in the floodplain must be elevated above the base or "100-year" flood elevation. No construction, including filling, can be allowed in the mapped floodway of Grand Forks without an engineering analysis that proves that the project will not increase flood damage elsewhere. The ordinance also requires that all substantial improvements to a building be treated as a new building. A substantial improvement is when the value of an addition, alteration, or reconstruction project exceeds 50% of the value of the existing building.

This information is being made available to you from the City of Grand Forks so that you are aware of flood hazards to your property. Your questions and comments on the subjects covered here are welcomed and appreciated. To find out more about your property and if it's in the flood hazard area, contact the Building Inspections Department. The department has reference materials on floodplain regulations, floodproofing and retrofitting. Also, the Grand Forks Public Library has been supplied with material on these subjects for your use.



City of Grand Forks Floodplain Management

For further information on the subjects included in this publication or just regarding flooding in general, please contact us by phone, internet, in person, or in writing at the following:

City Hall – 255 N. 4th St. Rm 225 701-746-2631 phone
<http://www.grandforksgov.com> 701-787-3741 fax