

GREAT LAKES REGIONAL COPY

# FLOODPLAIN / SHORELAND MANAGEMENT



a guide for local zoning officials

*Water*  
regulation  
& zoning

Department of Natural Resources  
Madison, Wisconsin

## Do you own property in the floodplain?

If you own undeveloped property in the floodplain and plan to develop it in any way, you must comply with the existing floodplain regulations. If you own property that was developed before your floodplain zoning ordinance became effective, you may be eligible for some exceptions to the requirements. You will still need to contact your zoning administrator and go through the permit process anytime you plan to modify or improve your property.

## The National Flood Insurance Program

Congress enacted the National Flood Insurance Program (NFIP) in 1968 to provide a new approach to floodplain management. The NFIP is administered by the Federal Emergency Management Agency (FEMA). It helps you to cover potential flood losses, and encourages safe floodplain development. If your community is participating in this program, you can buy federally subsidized flood insurance. To participate, your community must adopt floodplain management regulations designed to prevent future losses.

FEMA is responsible for mapping flood hazard areas (regional floodplains) and provides copies of the maps to your local government. If your community does not join the program once the hazard areas are mapped, you are no longer eligible to buy the subsidized insurance, and your community may lose its eligibility to receive flood disaster relief.



## Who is required to buy flood insurance?

If you own property in a flood hazard area and your community is participating in the NFIP, flood insurance is required as a condition of any federally financed (or federally insured) loan or mortgage (i.e., FHA, VA, SBA, etc.). Flood insurance is also available to you, even though you do not live within an identified hazard area.

## Do you have questions about the National Flood Insurance Program?

- If you are a property owner, any insurance agent that sells homeowners policies can also provide flood insurance and information.
- For answers to general NFIP or insurance related questions, you should call FEMA's Insurance Servicing Agent toll-free at 800-638-6620.



## What is DNR's role?

The DNR administers the State Floodplain Management Program, which generally consists of assisting individual communities with their programs. It provides a variety of program support services including assistance in development of floodplain maps and zoning ordinances. The DNR also helps coordinate community efforts with other State and Federal programs, especially the National Flood Insurance Program.

## What you can do

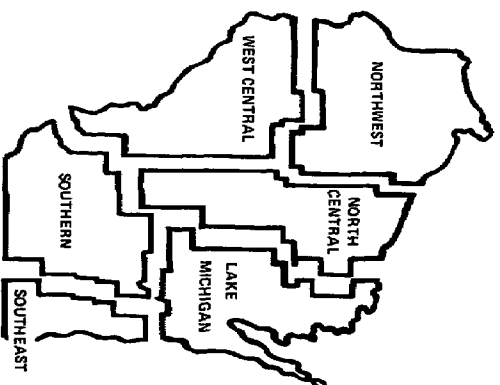
Find out if your property is in the floodplain, and learn all you can about the flood risks and regulations that apply to you. Tell your neighbors what you have learned and encourage them to support your community's floodplain management program.

Find out if your community is participating in the National Flood Insurance Program. If it is not, talk to your local officials and encourage them to participate.

Support your local floodplain management program, and help protect yourself and others from the devastating effects of floods.

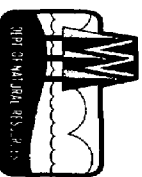
## How can you find out if your property is in the floodplain?

1. Your lending institution must determine if your structure requires flood insurance. It must inform you of this requirement at least 10 days prior to closing your federally financed or federally insured loan or mortgage.
2. Your zoning administrator can tell you if your property is zoned as floodplain, and what standards you need to meet to get a permit.
3. The DNR district and area offices can provide general floodplain and flood insurance information and refer you to an appropriate source for further details.



## DNR District and Area Offices:

<b>Northwest/Spooner</b> (715)635-2101	<b>North Central/Rhineland</b> (715)362-7616
<b>Area Offices:</b> Spooner (715)635-2101 Cumberland (715)822-3590 Park Falls (715)762-3204 Belle (715)372-4503	<b>Area Offices:</b> Rhineland (715)362-7616 Wis. Rapids (715)423-5670 Antigo (715)627-4317 Woodruff (715)356-1212
<b>West Central/Eau Claire</b> (715)836-2821	<b>Lake Michigan/Green Bay</b> (414)494-9601
<b>Area Offices:</b> Eau Claire (715)836-2928 La Crosse (608)785-9000	<b>Area Offices:</b> Green Bay (414)497-4030 Oshkosh (414)424-4003 Marquette (715)732-0101
<b>Southern/Madison</b> (608)256-2628	<b>Southeast/Milwaukee</b> (414)257-6543
<b>Area Offices:</b> Nevin (608)266-0480 Dodgewille (608)935-3368	<b>Area Office:</b> Milwaukee (414)257-6952



Wisconsin Department of Natural Resources

## How is it accomplished?

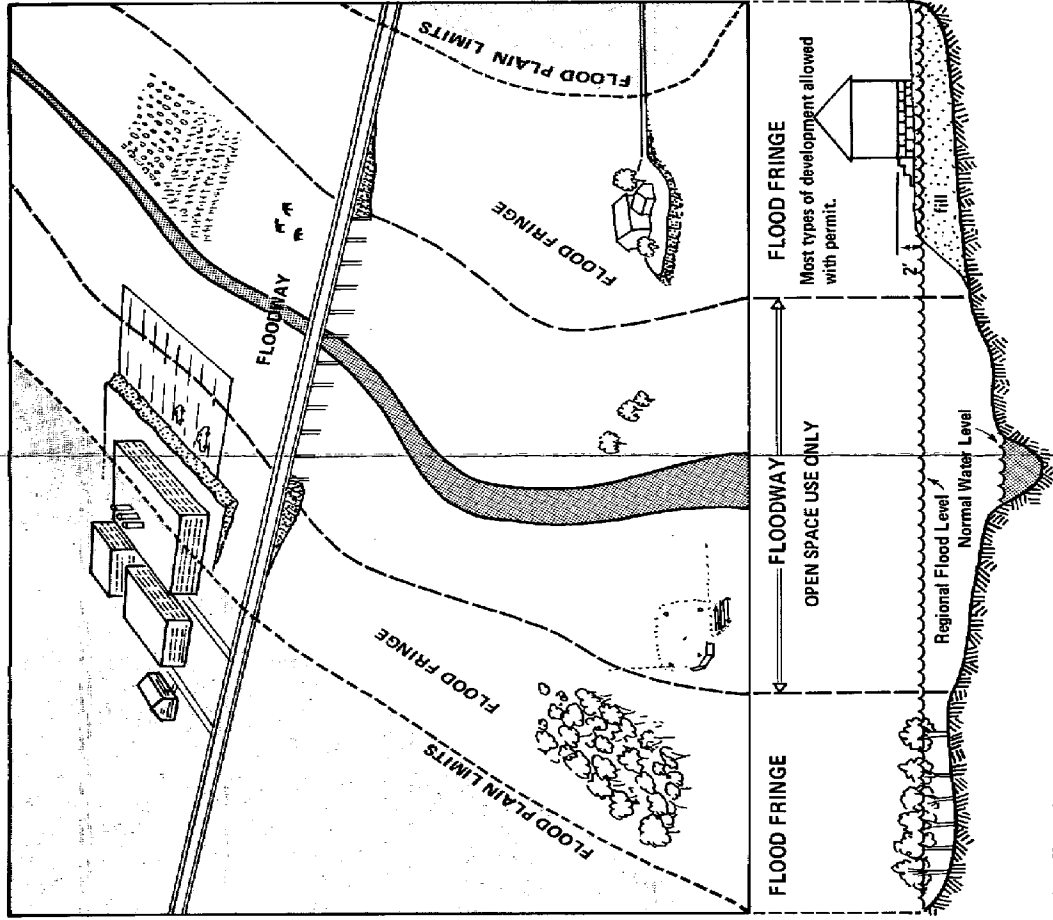
In Wisconsin, the primary responsibilities for floodplain management are local. Your community (and/or county) is required to develop floodplain management standards in the form of a floodplain zoning ordinance. The ordinance requires that you obtain a permit from your zoning administrator anytime you wish to modify your floodplain property. Plans for new construction, or improvements to existing structures must meet the requirements of your zoning ordinance before you can obtain a permit. If you carefully comply with the requirements, you will not only protect your investment from flooding, but may also increase the market value of your property.

## What is a "regional flood"?

The regional flood is a large flood that has a 1% chance of occurring or being exceeded in any year. This means it has a 26% chance of occurring during a common 30-year mortgage period. You may also hear it described as the 100-year flood, as there is one chance in 100 that a flood of this size (or larger) will happen in any given year. It does not mean such a flood will happen only once in 100 years. The odds remain the same even if the regional flood happened the year before. The flood is exceeded every year somewhere in the country, and it is wise to know the risks and protect yourself accordingly.

## What is the floodplain?

Floodplains are the low lands adjoining lakes and rivers which will be covered by water during the regional flood. Since this is an area of considerable risk, your community's zoning ordinance carefully controls the uses of such land. For management purposes, the floodplain is divided into two "districts" called the *floodway* and the *flood fringe*.



### The floodway

The floodway is the most dangerous part of the floodplain and is the area covered by deep, fast moving waters. It includes both the channel of the river or stream, and the adjacent floodplain lands required to carry off excess waters from the regional flood.

### The flood fringe

The flood fringe is the remaining portion of the floodplain, lying outside of the floodway, which is needed to store flood waters. Water in the flood fringe tends to be slow moving and not as deep as water in the floodway.

## Development in the floodway

The hazardous nature of the floodway requires that development in this area be carefully managed. Ideally, development in the floodway should be restricted to open space uses that do not interrupt the natural flow of the water. Anything unnatural that prevents the water from quickly moving downstream prolongs flood problems and jeopardizes lives and property.

Examples of uses allowed by permit in the floodway include:

- agricultural (pasture, grazing, etc.)
- golf courses, tennis courts, parks
- boat launching ramps, marinas, docks

These uses will not suffer excessive damage if flooded, and if properly designed will not block the free flow of the water.

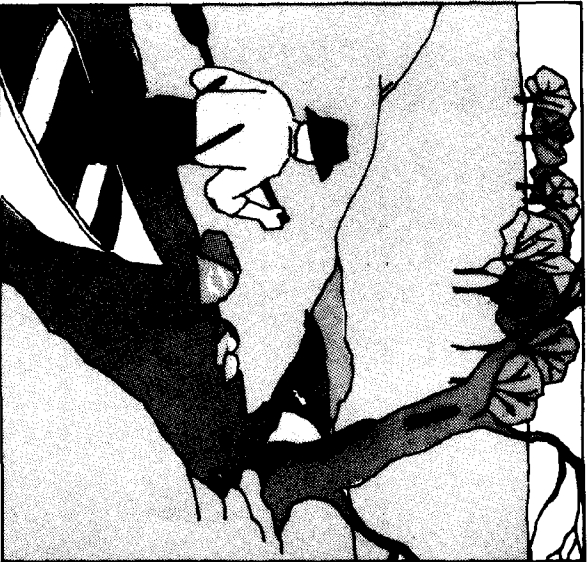
Uses not permitted in the floodway are those which threaten human lives, health, or property, and those which will increase flood heights. Prohibited uses include:

- structures designed for human habitation
- storage of buoyant or dangerous materials
- water wells used for human consumption
- septic tanks
- solid waste disposal

## Development in the flood fringe

Although this area is less hazardous than the floodway, damages to property in the flood fringe can be significant. Most types of development are allowed in the flood fringe, if properly protected from flooding. Land use permits require that structures be protected from the regional flood by being elevated on fill at least two feet above the regional flood level. The structure must be accessible by emergency vehicles to reach victims or to shut off gas, electrical and water lines. Your zoning administrator can give you additional details on floodplain construction standards.

water management coordinator (see map) with questions about artificial waterways.



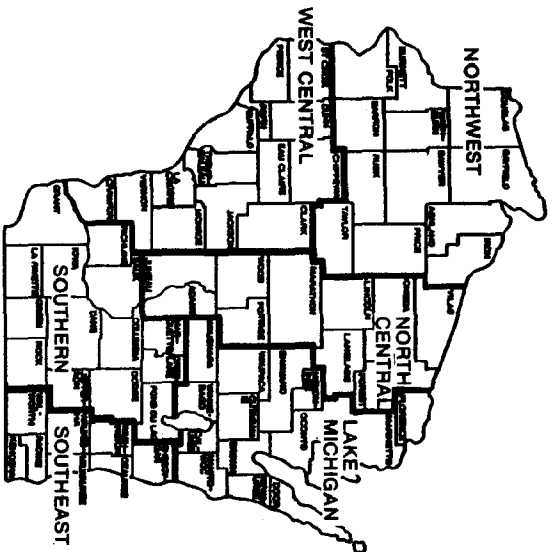
DNR staff determine that this typical small stream is navigable.

## Is the stream on your property navigable?

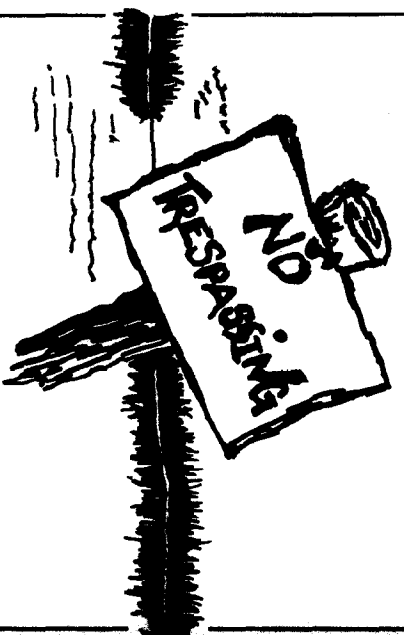
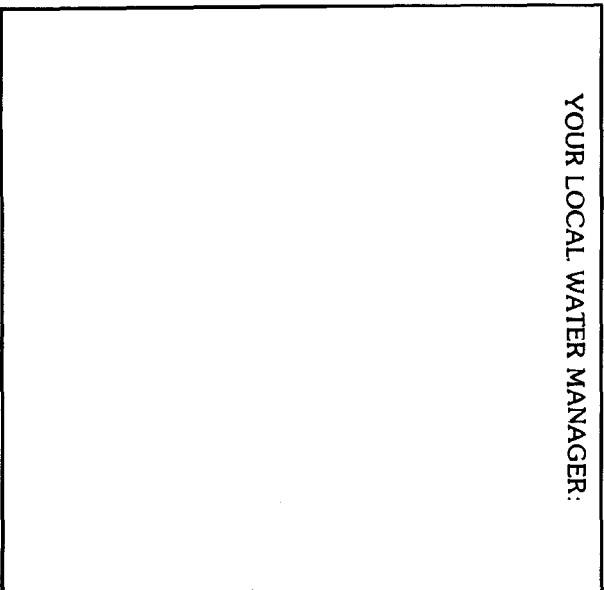
For the answers to specific questions like this one or for advice and assistance, contact your district water management coordinator as listed below.

### DNR DISTRICT OFFICES

<b>NORTHWEST</b> Box 309 Spooner, WI 54801-0309 (715) 635-2101	<b>LAKE MICHIGAN</b> Box 3600 Green Bay, WI 54303-1208 (414) 497-4030
<b>WEST CENTRAL</b> 1300 W. Chattermont Ave. Eau Claire, WI 54702-4001 (715) 836-2821	<b>SOUTHERN</b> 3911 Fish Hatchery Road Madison, WI 53711-5397 (608) 266-2628
<b>NORTH CENTRAL</b> Box 818 Rhinelander, WI 54501-0818 (715) 362-7616	<b>SOUTHEAST</b> Box 13248 Milwaukee, WI 53213-0248 (414) 257-6543

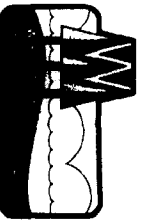


YOUR LOCAL WATER MANAGER:



**PUBLIC  
OR  
PRIVATE?  
I**

**Navigability**



Pub. 5-3500(62)

**Water**  
regulation  
& zoning

18000-82



## What is navigability?

- Navigability determines whether a waterway is public or private. Navigable lakes and streams are public waterways.
- A waterway is navigable if it has bed and banks, and it is possible to float it in a canoe or other small craft at some time of the year—even if only during spring floods.
- The federal definition of navigability is different from ours in Wisconsin. The federal government calls waters navigable which are, were ever or could in the future be used for navigation in interstate commerce. Interstate commerce includes not only shipping but also floating logs from forest to sawmill.

## How does navigability affect you?

- Because they are public, you may use navigable waterways for boating, hunting, fishing, swimming or other recreational activities provided public access is available, or you have the permission of the landowner. Contrary to common belief, there is usually no strip of public ownership along public waterways. If the land along a navigable waterway is privately owned, you may be prosecuted for trespassing if you cross the land to use the waterway without permission.
- Navigable waterways are protected by law in order to guarantee all citizens their water rights. You will need to get a permit or plan approval for projects which affect navigable waterways. Contact your district water management coordinator (see map) for applications and information.

## Where did the concept of navigability come from?

Both the Northwest Ordinance of 1787 which governed the Wisconsin Territory prior to statehood and the Constitution adopted when Wisconsin became a state declared all navigable waters to be public. However, neither document defined "navigable waters."

At first, rivers and streams which were meandered (surveyed) and declared navigable by U.S. government surveyors were considered navigable under territorial and early state law.

Using these surveys, courts determined the navigability of lakes although the statutes did not specifically define lake navigability until much later. Even when meandering was declared as the basis for navigability, the courts held many non-meandered lakes to be navigable.

As the timber industry grew, Wisconsin began to apply the saw-log test of navigability. The courts said that rivers of the state that could float the products of the country, such as logs and timber, were public highways. One creek was declared navigable, even though the creek itself could not be seen through the alders and brush, because logs could be floated on it three or four times a year.

By 1900, recreation was replacing lumbering and milling as a major Wisconsin industry. As water uses changed, a new definition of navigability was adopted by the legislature. A lake or stream was considered navigable if it was "navigable-in-fact for any purpose whatsoever."

Since the early 1900's the courts have clarified what was meant by "navigable-in-fact for any purpose whatsoever." Navigation for recreational purposes, including the enjoyment of scenic beauty, was declared to be a right entitled to the same degree of protection as financial rights. The court restated the rule that streams did not need to be navigable at normal levels but only on a regularly recurring basis, such as during spring rains. Periodic obstructions do not make a waterway non-navigable. It was also ruled that non-navigable streams may be made navigable by natural obstructions such as beaver dams.

From the specific saw-log test, Wisconsin's test of navigability has come to take into account most demands made on water by the state's citizens. The broad definition of navigability ensures protection of our waterways for the future.

## How does the DNR determine navigability today?

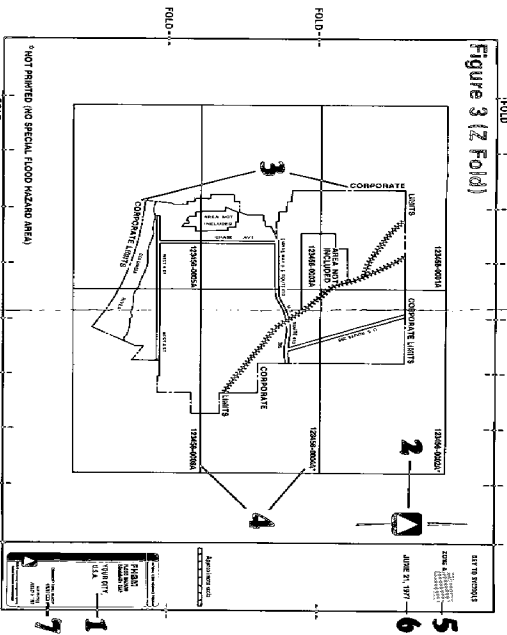
The test of navigability is simple. Using the smallest watercraft common to a region (usually a canoe), DNR staff paddle through the water.

The waterway should have a bed and sides or banks. In other words, it should be more than just rain water or melting snow flowing in a hollow or ravine.

It is not necessary to be able to float the waterway at all times. Navigability may be established if a stream or lake can be navigated on some regularly occurring basis, such as during the spring thaw.

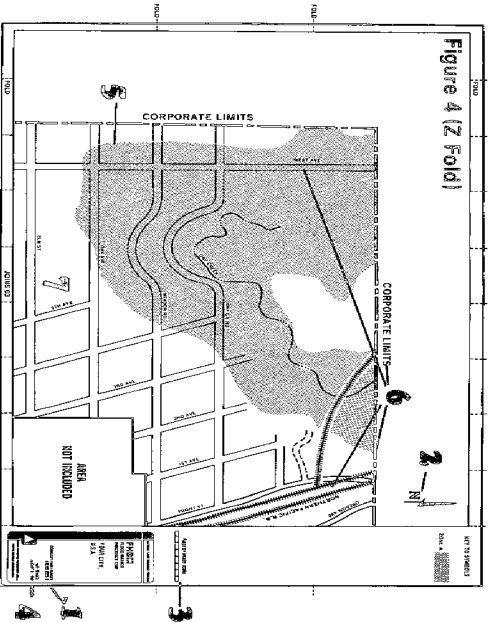
Artificial waterways such as agricultural drainage ditches are treated differently. Contact your district

## How to Read the Map Index Page



1. Look at the Map Index Title Block and make sure it refers to the community you're interested in.
2. Orient the Map Index Page using the North Arrow and, if you choose, a more detailed map of your own.
3. Check to see if the property in question is within the corporate limits indicated by the broken line.
4. Note the numbered map sections. Each corresponds to a separate sheet of the Flood Hazard Boundary Map (FHBMA). If the number is followed by an asterisk (\*) no map has been printed for the area because no flood hazard exists. On a Z-FOLD map index this number contains 10 digits, e.g. 123456-0001 and a letter suffix. The first six digits are the community number (see 7) and the last four are the panel number. The letter suffix indicates panel revision status. Initial maps show the letter A. Z-FOLD map panels may be revised and reprinted individually so panels may have different letter suffixes.
5. The legend explains the symbols used to identify the Special Flood Hazard Area (SFHA) shown on the FHBMA.
6. The Initial Identification Date is the official date the community was identified as being flood prone. A Revision Date indicates that changes were made.
7. The Community Number is the primary means of identifying the community for insurance purposes. All flood insurance policies written in the community under the program must include this number on the policy application.

## How to Read the Flood Hazard Boundary Map



1. When map is folded the community panel number is on the bottom third of the title block and it corresponds to the numbered section on the Map Index Page.
2. Use the North Arrow to orient the map panel.
3. The distance scale is measured in feet.
4. The Effective Date of the panel may differ from the Identification Date on the Map Index Page (See Figure 1, No.5). The Identification Date does not change. The Effective Date for each sheet changes every time it is revised.
5. The shaded areas indicate the Special Flood Hazard Areas. The boundary of the shaded area shows the outline of the base flood. . . . the depicted one percent chance flood which is that flood having one chance in 100 of being equaled or exceeded in any one year period.
6. The map sheet may also show sections of the corporate limits, roads and highways, bodies of water, railroad tracks and other landmarks to help you locate specific properties.
7. The number of the adjoining map sheet is found in each margin. Using them as guides, you could put together one large map of the entire area.

FHBMs may not show all areas of flooding in the community. As new hazard areas are identified, new maps will be issued.

As a second priority, FIA arranges for a detailed Flood Insurance Study. One result of this Study is a Flood Insurance Rate Map that provides information on the degree of flood hazard within identified Special Flood Hazard Areas and may include flood elevations. The degree of flood hazard is the key factor in determining insurance rates for specific properties in the area. If you have any questions or need further assistance contact the Federal Insurance Administration office for your state.

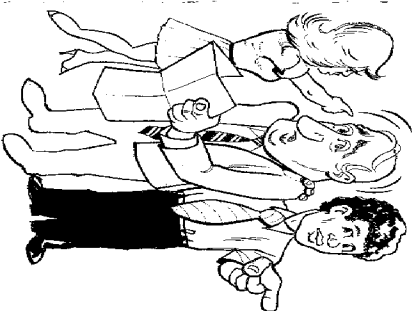
### REGIONAL FLOOD INSURANCE OFFICES

- |   |  |  |  |
|---|--|--|--|
| <b>REGION I</b><br>J.W. McDonald Post Office and Courthouse Building, Box 422<br>Federal Building<br>Commercial No. 617/2323092<br>FIS-233-2616<br>(FBI) CT, ME, MA, NH, RI, VT | <b>REGION VI</b><br>Federal Post Office and Courthouse Building, Box 422<br>Federal Building<br>Commercial No. 617/2323092<br>FIS-233-2616<br>(FBI) AR, LA, NM, OK, TX | <b>REGION II</b><br>28 Federal Plaza, Box 15, 100<br>New York, New York 10103<br>Commercial No. 617/232-4106<br>(FBI) NJ, NY, PA, VA, WV       | <b>REGION VII</b><br>Federal Office Building<br>911 Market Street<br>Kansas City, Missouri 64108<br>Commercial No. 816/242-1218<br>(FBI) IA, MO, ND              |
| <b>REGION III</b><br>South and West of State<br>Philadelphia Pennsylvania 19106<br>Commercial No. 617/527-5831<br>FIS-233-2616<br>(FBI) DE, MD, VA, VA, WV                      | <b>REGION VIII</b><br>211 Main St., Room 202<br>Federal Post Office<br>Commercial No. 415/528-8602<br>FIS-233-2616<br>(FBI) AK, HI, IL, IN, MI, MN, OH, WI             | <b>REGION IV</b><br>400 DuSable Drive<br>Quincy, Illinois 62301<br>Commercial No. 618/681-7231<br>FIS-233-2616<br>(FBI) CO, IA, KY, MS, SC, TN | <b>REGION IX</b><br>Federal Regional Center<br>107 22nd St., SW<br>Denver, Colorado 80202<br>Commercial No. 303/734-5482<br>FIS-233-2616<br>(FBI) AZ, CA, HI, NV |

Supersedes FIA 3 dated June, 1989  
which may not be used.  
\* U.S. GOVERNMENT PRINTING OFFICE: 1981-792208

FIA 3 / April 1991  
FROM THE NATIONAL FLOOD INSURANCE PROGRAM.

## HOW TO READ FLOOD HAZARD BOUNDARY MAPS



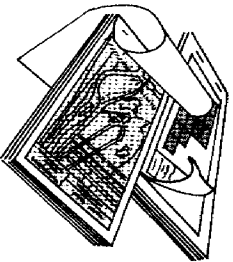
A guide for interested citizens, community officials, lending institutions, and insurance agents.

Federal emergency management agency  
Federal Insurance Administration  
Washington, D. C. 20472



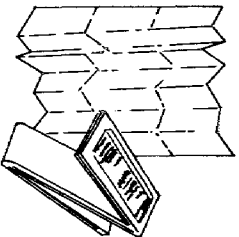
This guide will help you interpret the Flood Hazard Boundary Maps (FHBM) issued by the Federal Insurance Administration (FIA) under the National Flood Insurance Program. These maps provide a preliminary indication of where in the community there is definite likelihood of flooding. Each map consists of one Map Index Page and one or more map sheets for all of the areas within the community's corporate limits subject to flooding. These will be in one of two forms:

A. Flat Map Format—which includes a map index, with a legend (Figure 1) on the cover sheet, and 11" x 17" map panels covering the community. (Figure 2).

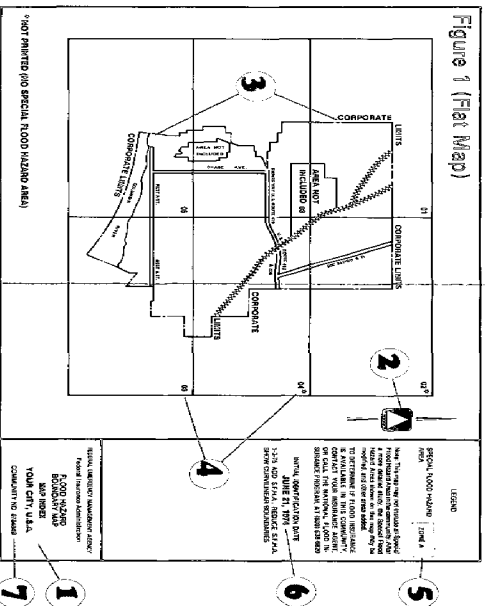


Flood insurance under the program may be sold throughout the entire United States. However, in some states, such as Florida, Hazard Area (Special), it is required under certain circumstances in the Special Flood Hazard Boundary Map (SFHBM) to be available only to communities participating in the National Flood Insurance Program.

B. Multiple-Fold Map Format (Z-FOLD)—which includes a map index (Figure 3) only if more than one map panel is required for the community. Map panels (Figure 4) include a legend on each and may come in varying sizes, depending on the size and shape of the community and the area covered.

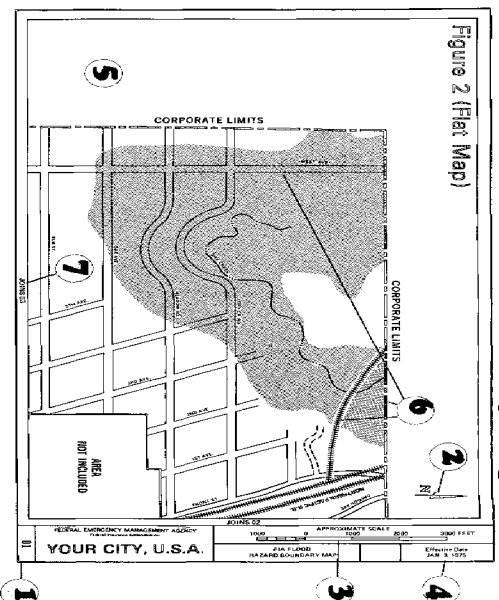


## How to Read the Map Index Page



- 1 Look at the Map Index Title Block and make sure it refers to the community you're interested in.
- 2 Orient the Map Index Page using the North Arrow and, if you choose, a more detailed map of your own.
- 3 Check to see if the property in question is within the corporate limits indicated by the broken line.
- 4 Note the numbered map sections. Each corresponds to a separate sheet of the Flood Hazard Boundary Map (FHBM). If the number is followed by an asterisk (\*) no map has been printed for the area because no flood hazard exists.
- 5 The legend explains the symbols used to identify the Special Flood Hazard Area (SFHA) shown on the FHBM.
- 6 The Initial Identification Date is the official date the community was identified as being flood prone. A Revision Date indicates that new flood hazard areas were identified after the map was first issued or other changes were made.
- 7 The Community Number is the primary means of identifying the community for insurance purposes. All flood insurance policies written in the community under the program must include this number on the policy application. A letter suffix after the community number usually indicates a map revision.

## How to Read the Flood Hazard Boundary Map



- 1 The number in the lower righthand corner of each map panel corresponds to a numbered section on the Map Index Page. Turn to the sheet you are interested in.
- 2 Use the North Arrow to orient the map panel.
- 3 The distance scale is measured in feet.
- 4 The Effective Date of the panel may differ from the Identification Date on the Map Index Page (See Figure 1, no. 6). The Identification Date does not change. The Effective Date for each sheet changes every time it is revised.
- 5 The shaded areas indicate the Special Flood Hazard Areas. The boundary of the shaded area shows the outline of the base flood ... the depicted one percent chance flood which is that flood having one chance in 100 of being equaled or exceeded in any one year period.
- 6 The map sheet may also show sections of the corporate limits, roads and highways, bodies of water, railroad tracks and other landmarks to help you locate specific properties.
- 7 If certain areas are not a part of the community, such as state parks, military installations, etc., they are enclosed by a solid black line and the notation "Areas not included. Flooding may or may not be shown in these areas."

### AFTER THE FLOOD (continued)

- Prior to entering a building, check for structural damage. Make sure it is not in danger of collapsing. Turn off any outside gas lines at the meter or tank, and let the house air for several minutes to remove foul odors or escaping gas.
- Upon entering the building, do not use open flame as a source of light since gas may still be trapped inside, a battery-operated flashlight is ideal.
- Watch for electrical shorts or live wires before making certain that the main power switch is turned off. Do not turn on any lights or appliances until an electrician has checked the system for short circuits.
- Cover broken windows and holes in the roof or walls to prevent further weather damage. The expense of these temporary repairs is usually covered under your flood insurance policy/*subject to the policy deductible*. Therefore, it is important to save receipts.
- Proceed with immediate cleanup measures to prevent any health hazards. Perishable items which pose a health problem should be listed and photographed before discarding. Throw out fresh food and previously opened medicines that have come in contact with floodwaters.
- Water for drinking and food preparation should be boiled vigorously for ten minutes (until the public water system has been declared safe). Another method of disinfecting is to mix ½ teaspoon of liquid commercial laundry bleach with 2½ gallons of water. . . let stand for five minutes before using. The flat taste can be removed by pouring the water from one container to another, or adding a pinch of salt. In an emergency, water may be obtained by draining a hot water tank or melting ice cubes.
- Refrigerators, sofas and other hard goods should be hosed off and kept for the adjuster's inspection. A good deodorizer when cleaning major kitchen appliances is to add one teaspoon of baking soda to a quart of water. Any partially damaged items should be dried and aired; the

adjuster will make recommendations as to their repair or disposal. Take pictures of the damage done to your building and contents.

- Take all wooden furniture outdoors, but keep it out of direct sunlight to prevent warping. A garage or carport is a good place for drying. Remove drawers and other moving parts as soon as possible, but do not pry open swollen drawers (or doors) from the front. Instead, remove the backing and push the drawers out.
- Shovel out mud while it is still moist to give walls and floors a chance to dry. Special attention at this early stage should be paid to cleaning out heating and plumbing systems. Once plastered walls have dried, brush off loose dirt. Wash with a mild soap solution and rinse with clean water; always start at the bottom and work up. Ceilings are done last.
- Mildew can be removed from dry wood with a solution of 4 to 6 tablespoons Tri-sodium phosphate, 1 cup liquid chlorine bleach, and 1 gallon water.
- Clean metal at once then wipe with a kerosene-soaked cloth. A light coat of oil will prevent iron from rusting. Scour all utensils, and, if necessary, use fine steel wool on unpainted surfaces. Aluminum may be brightened by scrubbing with a solution of vinegar, cream of tartar, and hot water.
- Quickly separate all laundry items to avoid running colors. Clothing or household fabrics should be allowed to dry (slowly, away from direct heat) before brushing off loose dirt. If you cannot get to a professional cleaner, rinse the items in lukewarm water to remove lodged soil. Then wash in lukewarm, mild detergent; rinse and dry in sunlight.
- Flooded basements should be drained and cleared as soon as possible. Remember, however, that structural damage can occur by pumping out the water too quickly. After the surrounding floodwaters have subsided, begin draining the basement in stages, about ½ of the water volume each day.

### WHAT IS THE NATIONAL FLOOD INSURANCE PROGRAM?

The NFIP is a federal program established by Congress in 1968 that enables property owners to buy flood insurance at reasonable rates. In return, communities carry out local flood plain management measures to protect lives and property from future flooding.

The Program is administered by the Federal Emergency Management Agency (FEMA) through its Federal Insurance Administration.

For communities participating in the NFIP, flood insurance is available on almost any building and contents. This includes single- and multi-family dwellings, mobile homes, businesses, government and farm buildings, churches and schools. Contents coverage is also available to renters.

To find out more about flood insurance eligibility and your property's exposure to flood risk, contact any licensed property/casualty agent or broker. You can also determine if your property is in a special flood hazard area by checking with the local public repository for official maps of your community, the main branch of a public library, or the city/county engineer's office.

#### CALL YOUR AGENT OR BROKER TODAY



federal emergency management agency  
federal insurance administration  
national flood insurance program

800-257-6881

PLACE AGENT BRANCH HERE



**IN THE EVENT OF A FLOOD**  
SUGGESTIONS TO HELP MINIMIZE THE LOSS OF LIFE AND PROPERTY



**FLOODING**  
...it's a not-so-natural disaster

**"About 11 o'clock last night the water started coming in over the bridge. Between 11 and 11:20 it was incredible how fast it rose. There was really no time to move. Or get out. Or anything . . . Whatever is gone in this neighborhood is gone. It's a total loss."**

resident of Austin, TX  
May 24, 1981

The memories of a natural disaster can last a lifetime. But even if you have never experienced a major flood, you should have some idea of what to do when flood waters threaten your community. Keep in mind that flooding is responsible for the deaths of more than 10,000 people since 1900, and that property losses in the United States are now totalling over \$1 billion each year.

For the protection of you and your family, the following tips are suggested as guidelines by the National Flood Insurance Program. If you are ever in doubt as to what action is needed, always consult local disaster officials.

### Steps to Take Today

**Make an itemized list of personal property, including furnishings, clothing and valuables. Photographs of your home - inside and out - are helpful. This will assist an adjuster in settling claims and will help prove uninsured losses, which are tax deductible.**

- Learn the safest route from your home or place of business to high, safe ground should you have to evacuate in a hurry.
- Keep a portable radio, emergency cooking equipment, and flashlights in working order.
- Persons who live in frequently flooded areas should keep on hand materials such as sandbags, plywood, plastic sheeting, and lumber which can be used to protect properties. (Remember, sandbags should not be stacked directly against the outer walls of a dwelling since, when wet, the bags may create added pressure on the structure.)
- BUY FLOOD INSURANCE.** Protection against loss due to floods is not covered under a homeowner's policy. You should contact your property/casualty agent or broker about eligibility for flood insurance, which is offered through the National Flood Insurance Program (NFIP). Generally, there is a five-day waiting period for this policy to become effective, so don't wait until the last minute to apply.

### When the Flood Comes

Keep your insurance policies and a list of personal property in a safe place, such as a safe deposit box. Know the name and location of the agents who issued these policies.

**The safety of your family is the most important consideration. Since flood waters can rise very rapidly, you should be prepared to evacuate before the waters reach your property.**

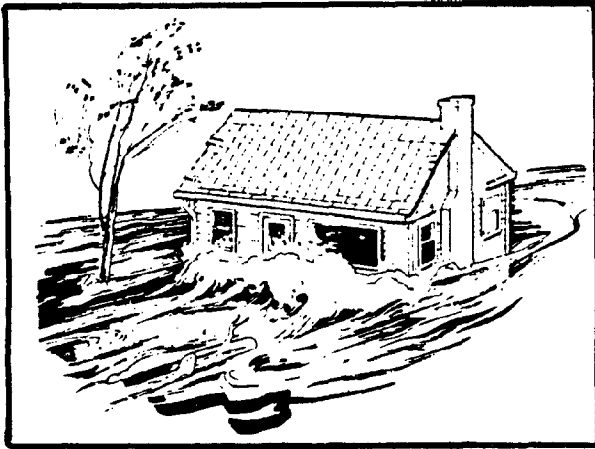
- Keep a battery-powered radio tuned to a local station, and follow all emergency instructions.
- If you're caught in the house by suddenly rising waters, move to the second floor and, if necessary, to the roof. Take warm clothing, a flashlight, and portable radio with you. Then wait for help... don't try to swim to safety. Rescue teams will be looking for you.
- When outside the house, remember: **FLOODS ARE DECEPTIVE.** Try to avoid flooded areas, and don't attempt to walk across stretches of floodwaters that are more than knee deep.
- IF, AND ONLY IF, TIME PERMITS...** there are a number of precautionary steps that can be taken:
  - Turn off all utilities at the main power switch and close the main gas valve. If evacuation appears necessary, do not touch any electrical equipment unless it is in a dry area, or you are standing on a piece of dry wood while wearing rubber-soled shoes or boots and rubber gloves.
  - Move valuable papers, furs, jewelry, clothing, and other contents to upper floors or higher elevations.
  - Fill bathtubs, sinks, and jugs with clean water in case regular supplies are contaminated (you can sanitize these items by first rinsing with bleach).
  - Board up windows or protect them with storm shutters or tape (to prevent flying glass).

- Bring outdoor possessions inside the house or tie them down securely. This includes lawn furniture, garbage cans, tools, signs, and other moveable objects that might be swept away or hurled about.
- If it is safe to evacuate by car, you should consider the following:
  - Stock the car with nonperishable foods (like canned goods), a plastic container of water, blankets, first aid kit, flashlights, dry clothing and any special medication needed by your family.
  - Keep the gas tank at least half full, since gasoline pumps will not be working if the electricity has been cut off.
  - DO NOT DRIVE WHERE WATER IS OVER THE ROADS.** Parts of the road may already be washed out.
  - If your car stalls in a flooded area, abandon it as soon as possible. Floodwaters can rise rapidly and sweep a car (and its occupants) away. Many deaths have resulted from attempts to move stalled vehicles.



### After the Flood

**If your home, apartment, or business has suffered flood damage, immediately call the agent or broker who services your flood insurance policy. The agent will then submit a loss form to the National Flood Insurance Program. An adjuster will be assigned to inspect your property as soon as possible.**



# Flood Facts

Wisconsin Department of Natural Resources  
Bureau of Water Regulation and Zoning  
P.O. Box 7921  
Madison, Wisconsin 53707-7921

## What can we do about floods ?

Floods are the most frequently encountered type of natural disaster.

90% of all Presidential declarations of emergency or major disaster involve flooding - either along the coasts or rivers and streams.

20,000 American communities have flood hazard areas. 7.4 million buildings are located in these flood hazard areas.

Flood damages throughout the nation total \$2-3 billion annually.

Wisconsin communities suffer \$100 million in yearly flood damages.

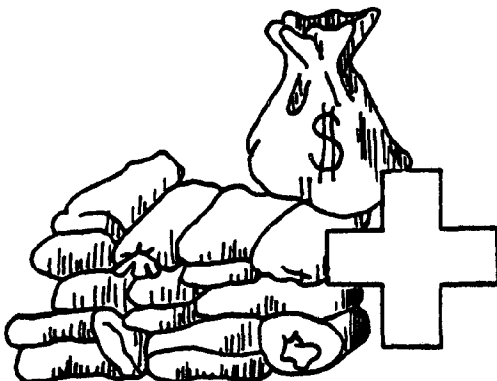
About 200 Americans lose their lives in floods each year.

Despite efforts of all levels of government to combat floods, annual flood losses continue to increase by 6-7% each year.

The direct and indirect costs of flood recovery are not borne by just the flood victims, but are shared by all American taxpayers.

### The direct costs of floods include:

- rescue and relief efforts
- emergency preparedness
- clean-up operations
- rebuilding public utilities and facilities



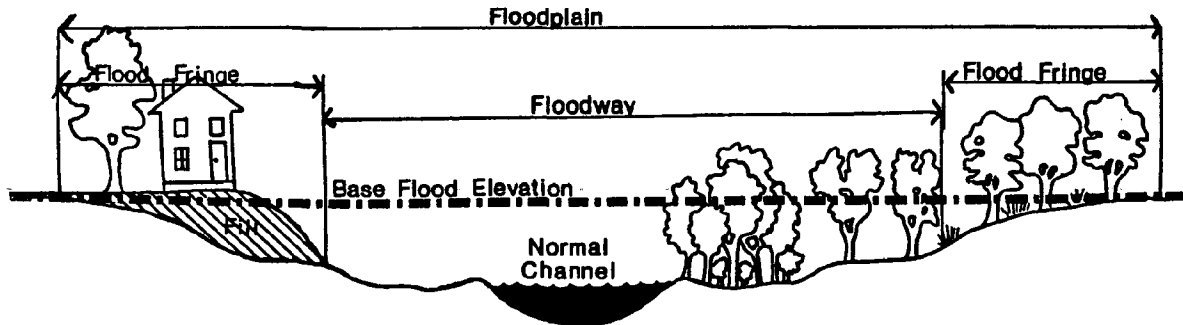
### Floods' indirect costs are hidden as:

- business interruptions and their loss of wages, sales and production
- construction, operation and maintenance of flood control works
- costs of loans for reconstructing damaged facilities
- tax base declines in flood blight areas
- subsidies for flood insurance
- loss of natural floodplain values

# What is a floodplain ?

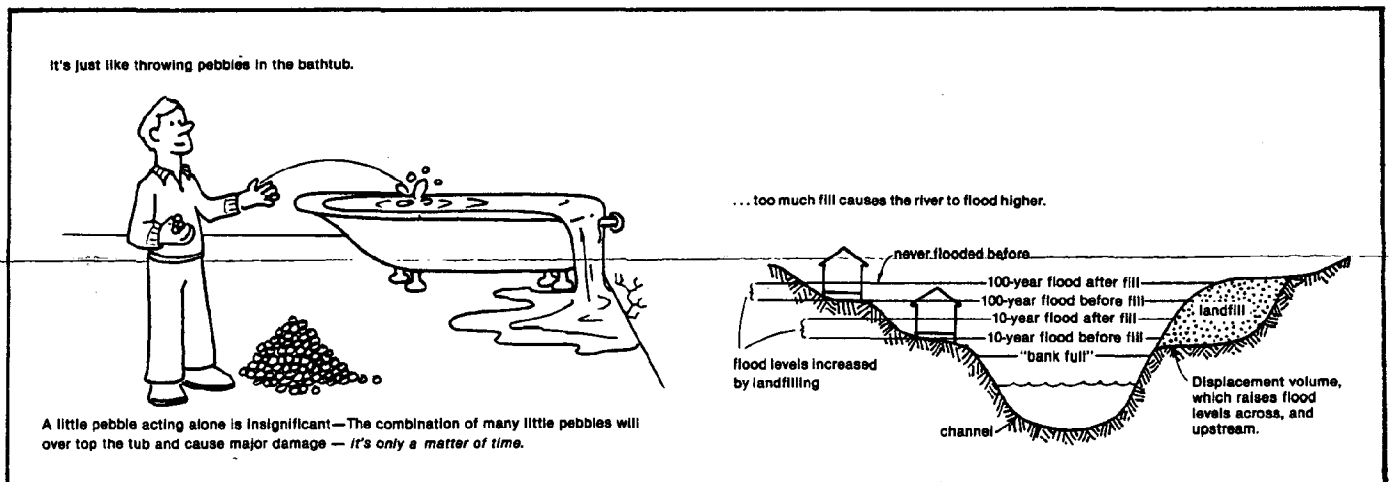
A floodplain is a lowland or relatively flat area next to a river or stream.

The river uses the floodplain to temporarily store and convey excess water during spring thaw or following heavy rains.



We have had floods as long as there have been rivers. But not until we developed our floodplains did floods damage property and endanger lives.

When we construct buildings in the floodplain we reduce the floodplain's storage capacity causing the next flood of equal intensity to crest higher than the last.



Floods are measured by their percent chance of happening. The standard of comparison is the 100-year flood. This flood has a 1% chance of happening in any given year. This 100-year flood has a 26% chance of occurring during a 30-year mortgage period. During a similar-30 year period, there is a 17% chance of a house being damaged by fire.

Floods are natural occurrences. It's not a matter of "will it flood?" but "when will it flood?"

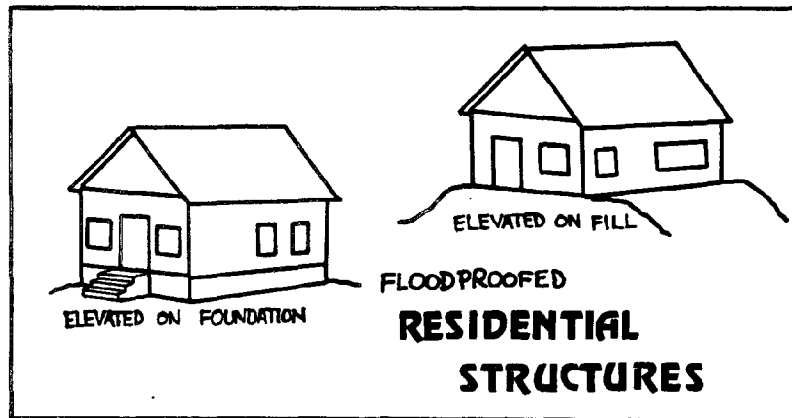
# What can we do about floods ?

Since 1936 the U.S. Army Corps of Engineers has been authorized to construct dams and levees for flood control purposes. But controlling floods with such structures is not always the only or best solution to flood problems.

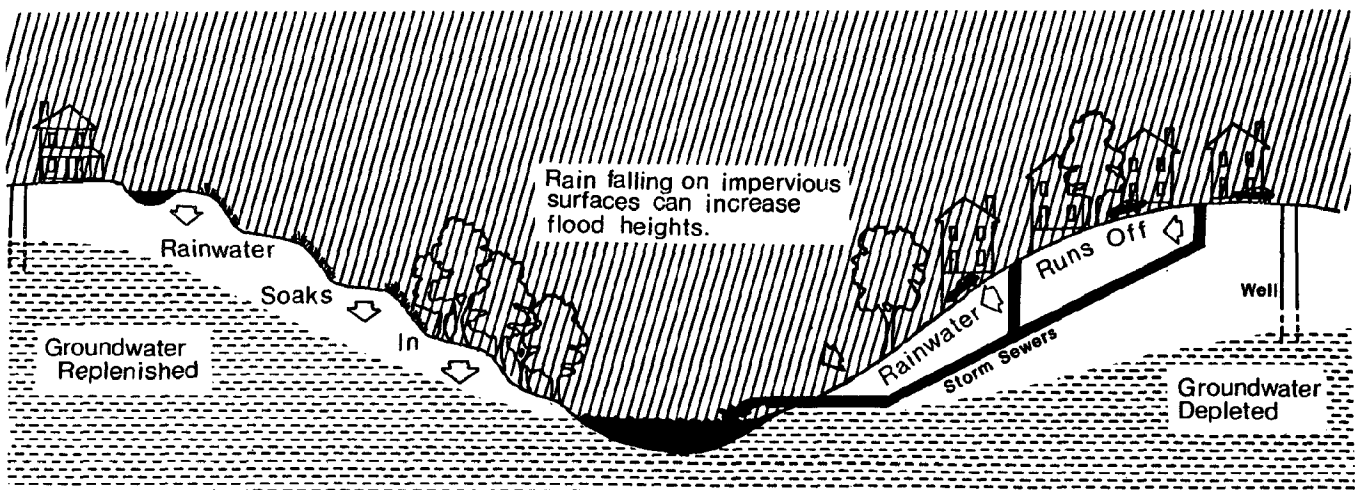
Land use regulations can control development in flood hazard areas. Development within floodplains can be limited to flood resistant structures. In undeveloped floodplains, "open space" uses can be encouraged. The resulting scenic parks, recreational areas, and wildlife refuges provide community amenities.

Flood warning systems and evacuation plans can allow people to protect their property and move to higher ground to prevent injuries.

Buildings in floodplains can be elevated on the spot or relocated on higher ground. Other floodproofing techniques are available but expensive. Bridges, roads and culverts can be designed to accommodate expected flood flows.



Land treatments in upland areas can attack the flood problem where it begins. Good soil and water conservation practices minimize runoff. Retention basins moderate run off to offset the higher degree of impervious surfaces that development brings.





Flood insurance allows a flood victim to spread his losses over several years.

- Home owners insurance does not cover floods; flood insurance is only made available through the National Flood Insurance Program.
- Realtors and lenders are required to notify buyers of potential flood hazards on a property at least 10 days before the closing.
- For people to be eligible to buy flood insurance, their community must have a floodplain management program in effect. This program must meet minimum federal standards. Residents of 63 Wisconsin counties and 420 cities and villages are eligible to buy flood insurance.
- While flood insurance is available to all property owners in qualifying communities, some people are required to carry it. This includes anyone buying flood prone property with a federally guaranteed (VA, FHA, SBA) loan or anyone obtaining financing from a federally insured bank or credit union.

## Wisconsin's Floodplain Management Program

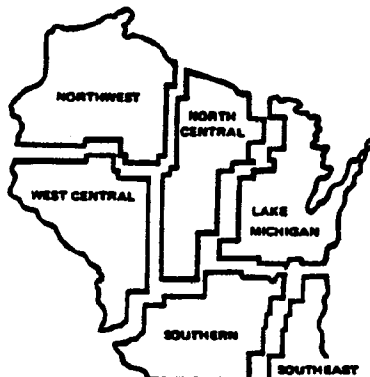
Wisconsin counties, cities and villages are required to zone their flood prone areas.

The state has set minimum standards for local regulations, but local governments can set more restrictive standards if they desire.

Floodplain zoning does not prohibit development within the floodplain but guides that development. The program's main goal is to protect people and their property from unwise floodplain development.

You can learn more about floods and floodplain management by calling or visiting your Area or District DNR office. The Federal Emergency Management Agency's Insurance Servicing Agent will answer flood insurance related questions. Call them toll-free at 800-638-6620.

### DNR District and Area Offices:



**Northwest/Spooner**  
(715)635-2101  
Area Offices:  
Spooner (715)835-2101  
Cumberland (715)822-3590  
Park Falls (715)762-4414  
Bruile (715)372-4866

**West Central/Eau Claire**  
(715)836-2928  
Area Offices:  
Eau Claire (715)836-2047  
La Crosse (608)785-9000

**Southern/Madison**  
(608)266-2628  
(608)266-8859  
Area Offices:  
Nevin (608)287-7718  
Dodgeville (608)935-3368

**North Central/Rhineland**  
(715)362-7616  
Area Offices:  
Rhineland (715)362-7616  
Wisc. Rapids (715)423-5670  
Antigo (715)627-4317  
Woodruff (715)356-5211

**Lake Michigan/Green Bay**  
(414)497-4040  
Area Offices:  
Green Bay (414)497-4369  
Oshkosh (414)424-4003  
Marinette (715)732-0101

**Southeast/Milwaukee**  
(414)257-6543  
(414)257-6950



*Water*  
regulation  
& zoning

## PROTECTION OF NAVIGABLE WATERS IN WISCONSIN

If you have property on a Wisconsin lake or stream, or are concerned about public access, you will be very much interested in the following summary.

### DO YOU KNOW:

*Permits or Approvals*

Many activities affecting navigable waters require permits or approvals from Wisconsin's Department of Natural Resources (DNR). Some of the physical alterations to navigable waters which require permits are listed on the back of this sheet. The appropriate DNR district office should be contacted for further information and assistance in initiating permit applications for certain activities. The attached map shows district boundaries and the location and addresses of district offices.

*Historical Perspective*

The water laws of Wisconsin are based on the State Constitution. The Constitution established the "public trust doctrine," which maintains that all navigable waters are held in trust by the state for the public.

*Natural Lakes*

The beds of natural lakes are owned by the state and held in trust for the public. Owners of adjoining upland have title to the land above the ordinary high watermark and a qualified right in the exposed lakebed in front of their property.

*Rivers and Streams*

On rivers and streams the owner of the adjoining upland owns the streambed to the center thereof, but his rights to use the stream are subject to regulation.

*Navigability*

Any lake or stream or other body of water which is navigable in fact is open to any member of the public for purposes of navigation, including boating, swimming, hunting, fishing, or other recreational purpose. In exercising such rights, the public may not trespass upon private property. Waters are navigable in fact under the law if, for example, the smallest recreational craft can be floated on a regularly recurring basis from year to year.

*Other Sources of Permits*

Some activities require permits from other sources such as county zoning administrators, the U.S. Army Corps of Engineers, and local municipalities.

*Shoreland and Flood Plain Zoning Ordinances*

Section 59.971, Wisconsin Statutes, required counties to adopt and administer regulations to control development along the shorelands of lakes and streams and within flood plains. Shoreland control is confined to lands within 1,000 feet of a navigable lake, pond or flowage, or within 300 feet of a river or navigable stream or to the landward side of the flood plain. Section 87.30, Wisconsin Statutes, also requires counties to adopt and administer regulations to control development in flood plains. Shoreland and flood plain zoning ordinances adopted by some counties govern: Permitted use of shorelands, flood plains, and wetlands; lot size; setbacks of buildings from navigable waters; tree and shrub cutting along shorelands; and location and size of waste disposal systems. County zoning administrators should be contacted in the county in which the contemplated work will be completed.

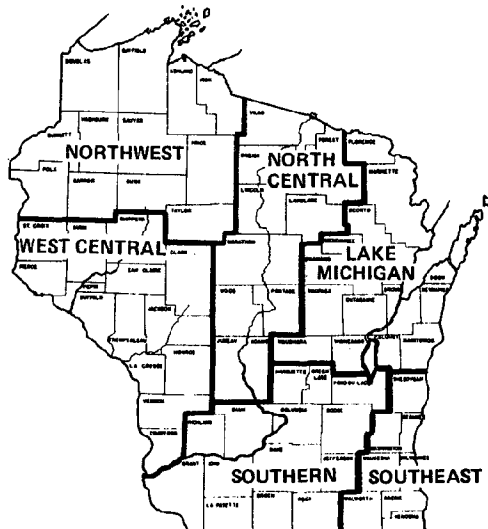
*U.S. Army Corps of Engineers*

The U.S. Army Corps of Engineers has regulatory authority to control encroachments in navigable waters of the U.S. Most recently under Section 404 of the Federal Water Pollution Control Act Amendments of 1972, they have been given the responsibility to regulate the discharge of dredged and fill material in coastal and inland waters and wetlands. District offices of the Corps and the DNR should be contacted for a more detailed summary of the Corps regulatory authority.

*For More Information Contact:*

DNR DISTRICT OFFICES:

<b>NORTHWEST DISTRICT:</b> Department of Natural Resources Box 309 Spooner, Wisconsin 54801 (715) 635-2101	<b>LAKE MICHIGAN DISTRICT:</b> Department of Natural Resources 812 S. Fisk St., Box 3600 Green Bay, Wisconsin 54303 (414) 497-4040
<b>NORTH CENTRAL DISTRICT:</b> Department of Natural Resources Box 818 Rhineland, Wisconsin 54501 (715) 362-7616	<b>SOUTHERN DISTRICT:</b> Department of Natural Resources Route 3, Wakanda Drive Waunakee, Wisconsin 53597 (608) 266-2628
<b>WEST CENTRAL DISTRICT:</b> Department of Natural Resources 1300 W. Clairemont Avenue Eau Claire, Wisconsin 54701 (715) 836-2821	<b>SOUTHEAST DISTRICT:</b> Department of Natural Resources P.O. Box 13248 Milwaukee, Wisconsin 53213 (414) 257-6543



STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF ENFORCEMENT  
P.O. BOX 7921  
MADISON, WISCONSIN 53707

WATER AND SHORELINE ACTIVITIES REGULATED BY WISCONSIN'S DEPARTMENT OF NATURAL RESOURCES

ACTIVITY	DESCRIPTION OF ACTIVITY	STATUTORY AUTHORITY	PERMIT REQUIRED	PERMIT EXEMPTIONS AND MISCELLANEOUS COMMENTS
Dredging	Removal of any material from the beds of any navigable water.	30.20	Yes	Contract required for removal of material from the beds of lakes.
Ponds, Enlargements	To construct, dredge or do any work on any artificial waterway, canal, lagoon, pond, or similar waterway where the purpose is ultimate connection with an existing navigable water, or where any part of such artificial waterway is located within 500 feet of the ordinary high watermark of an existing navigable water.	30.19	Yes	This section does not apply to the construction and repair of public highways or to any agricultural uses of land, nor to any navigable body of water located wholly or partially in any county having a population of 500,000 or more.
Grading	Grading or otherwise removing topsoil from the bank of any navigable water where the area exposed exceeds 10,000 square feet.	30.19	Yes	"
Channel Changes	To change or straighten the course of a navigable stream.	30.195	Yes	Does not apply to municipal or county-owned lands in counties having a population of 500,000 or more.
Bulkhead Lines	A legally established artificial shoreline intended to regularize the shoreline	30.11	**	** Established by municipal ordinance, approved by DNR.
Bridges	A private bridge over a navigable water more than 35 feet in width.	31.23	Yes	Approval required for bridges over streams less than 35 feet, under Section 30.10.
Sand Blankets	A thin layer of sand placed on the bed of lakes for improving the condition of the beach.	30.12 (2)b	Yes	When possible it is suggested that small gravel be used in order to make good spawning areas for fish.
Structures	Placement of any structure upon the bed of any navigable water.	30.12	Yes	"Structure" means any artificial creation which has utility and form.
Riprap	A layer of loose rock or other material placed to prevent erosion.	30.12(2)d	Yes	
Pipelines	The placement of a pipeline on or in the bed of a navigable water body.	30.12 30.20	Yes	Pipeline crossings on bed - 30.12 permit Pipeline crossings in bed - 30.20 permit
Diverstons	The temporary diversion of surplus water of any stream for the purpose of maintaining water levels or for irrigation.	30.18	Yes	Water other than surplus water may be diverted only with the consent of existing users.
Level and Flow	DNR may regulate and control the level and flow of water in navigable waters.	31.02	Yes	DNR may investigate any waterway or dam; may order dam to be equipped with special devices.
Dams	Permits required to construct, operate and maintain public and private dams in navigable waters.	31.05 31.06	Yes	Approvals required under Section 31.33 for dams on non-navigable streams.
Dam Abandonments, Dam Transfers	To abandon, alter, remove, or transfer ownership of a dam.	31.185	Yes	
Piers	Generally, no permit required for construction of piers or wharves in navigable waters to aid navigation.	30.13	No	30.12 permit required for construction of a solid pier or a pier which extends beyond a pierhead line.

CORRESPONDENCE/MEMORANDUM

STATE OF WISCONSIN

Date: April 15, 1982

File Ref: 3550

To: Water Regulation and Zoning Staff

From: LuAnne Hansen *LuAnne Hansen*

Subject: Staff Supplement to "Floodplain-Shoreland Management: A Guide for Local Zoning Officials"

HT 167,5 V. 6 8/27/1982

DNR Staff should be aware that this manual has been printed in two forms: one for counties, the other for cities and villages. The county version is identified by "Co. 2/82" at the bottom of each page, while "C&V 2/82" denotes the current edition of the city/village manual.

The changes in the two versions are mostly in the administrative procedures, Chapter 4. So that you can quickly note the differences in versions, I have prepared this package of pages you can substitute into your county manual. The city/village pages that are different have handwritten notes to tell you what the county manual says. By replacing the appropriate county manual sheets with those in this packet, you will have both editions at your fingertips without the bulk of extra paper.

Already we've noted some typographical errors and oversights in the 2/82 editions. This page dating system will allow us to make major corrections or additions fairly easily. As you find problem areas of the manual or have suggestions for improvement, drop me a memo or call me at 608/267-9798. I would appreciate feedback on how the new manual organization works for you. Thanks.

*[Faint, mostly illegible text, possibly bleed-through or a very light copy of another document. Some words like "of water regulation" are visible.]*

# Floodplain / Shoreland Management

## A Guide for Local Zoning Officials

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Charleston, SC 29405-2413

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NOTES

## Regulating Through Zoning

Through zoning a community can separate its land area into distinct districts. Within each district, various regulations for dimensions and uses will govern land use. Zoning enables a community to choose development that is most compatible with its resource base. Through shoreland zoning, navigable waters and their shores are protected from improper development. Floodplain zoning, on the other hand, protects people and property from a potentially hazardous environment.

Zoning usually regulates both the use of the land and dimensional and setback standards. In a zoning ordinance, a community lays out zoning districts and establishes permitted, special exception (conditional), and prohibited uses within each district. Dimensional standards specify lot sizes, setback distances, and placement of private sanitary facilities. Any development or change in land use that a landowner wishes to undertake requires approval by the local zoning administrator or a county agency. After the property owner completes the appropriate forms and supplies the necessary information, the zoning administrator may:

- 1) Issue a land use permit for allowed uses if the proper dimensional restrictions are met.
- 2) Advise the landowner to seek a variance if the dimensional standards create a hardship or practical difficulty.
- 3) Instruct the applicant to apply for a special exception (conditional use) permit for activities that are only allowed under certain conditions.
- 4) Suggest that rezoning (through an amendment) would be needed for a desired project which is not permitted due to use restrictions.

Within zoning ordinances, three sets of uses may be spelled out.

Permitted uses are those uses which are not prohibited. A building permit or land use permit may be required if the use involves construction or modification of a structure, or any type of development. The zoning administrator examines the completed application form, visits the site and may then issue a permit for appropriate projects. Projects involving uses which fail to meet dimensional standards must be referred to the Board of Appeals. The Board may authorize these projects by issuing a variance, but only if the proposed projects do not conflict with the intent of the zoning ordinance.

Special exceptions (conditional uses) may be compatible with permitted uses in a zoning district, but they need to be carefully considered to ensure that they are properly sited and operated. An applicant must contact the zoning administrator to make application for a special exception permit. <sup>(1)</sup>Cities and Villages may designate either the <sup>(2)</sup>Board of Appeals or the <sup>(3)</sup>Planning Commission to consider special exception permits. Uses not specifically identified as being permitted or special exceptions are prohibited.

(1) Counties  
(2) Board of Adjustment  
(3) Planning & Zoning Committee

- Prohibited uses may only be allowed in a given zoning district if the governing body authorizes an amendment to the zoning ordinance text or map. In rezoning an area to a different district, the once prohibited use may become a permitted use or a special exception. Map and text amendments are referred to the Planning Commission for a public hearing. The Commission makes recommendations to the City Council or Village Board which then takes official action. The application of these zoning principles in managing Wisconsin floodplain and shoreland areas is discussed in the following sections.

(1) *Planning + Zoning  
Committee*

(2) *Committee*

(3) *County Board*



Nonconforming structures (such as unelevated buildings in the flood fringe) can be rebuilt if they are floodproofed. Communities are responsible for regulating structural repairs through their building permit or land use permit programs. Ordinary maintenance such as painting, decorating, or paneling are not considered structural repairs, and are usually allowed without a permit. But when rebuilding, additions or modifications exceed over the life of the structure 50% of the present equalized assessed value, the entire structure must be floodproofed.

## Community Administration

To administer floodplain zoning, communities must appoint a zoning administrator, planning agency, and Board of Adjustment/Appeals. Many communities may already have these officials appointed for comprehensive zoning duties. In this case these officials will also administer the floodplain zoning ordinance. The specific duties of these officers is explained in Chapter 4 of this manual.

Anyone wishing to add a new use or alter the present use of land, water or a building or other structure in the floodplain must apply to the county, city or village for a permit, special exception, variance, or amendment. The local floodplain zoning ordinance must establish procedures for handling permits, amendments and appeals. NR 116 stipulates that public hearings must be held, proper notice given, and the DNR notified of all special exceptions, variances, appeals and amendments. Communities must have provisions for enforcing their floodplain regulations. Fines may be imposed for floodplain violations, but preferably, violations will be removed, abated or enjoined to preserve the spirit of the ordinance and to protect life, health and property.

## DNR Administrative Procedures

The DNR has responsibilities in four areas of floodplain management. The DNR: 1) provides assistance to local governments, 2) reviews and approves local floodplain zoning ordinance; 3) monitors local programs; and 4) enforces those programs to ensure a consistent statewide approach to floodplain management. The DNR also coordinates community efforts with other State and Federal programs, especially the National Flood Insurance Program.

DNR floodplain management responsibilities are shared between the Central (Madison), Area and District offices. The first line of assistance for local officials should be with the Water Management Specialist at the District or Area office. Refer to the map included in "Where to go for Help" in Chapter 6 to identify which office serves your community.

# Shoreland-Wetland Management

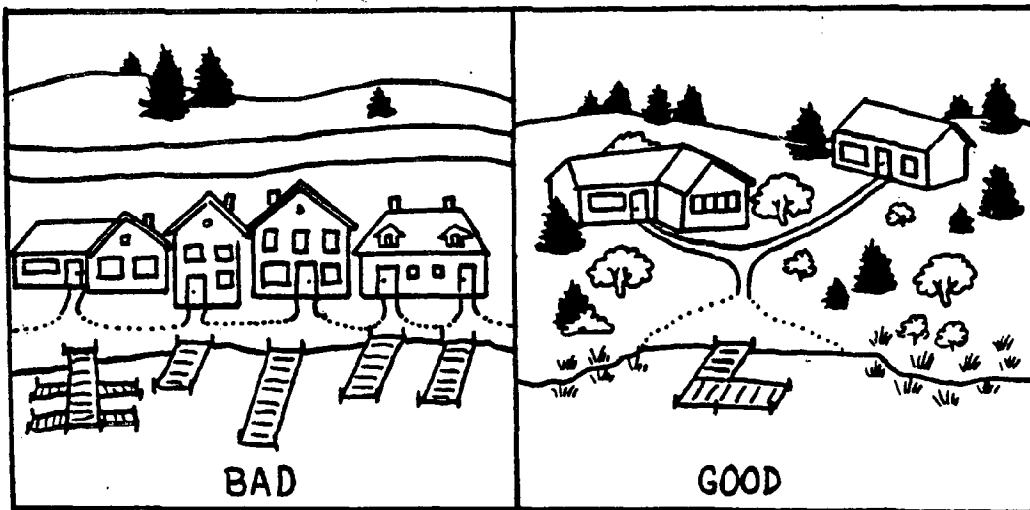
## In the Beginning: Shoreland Management Program — NR 115

(NOTE: Shoreland Zoning is optional in cities and villages. This section is provided as information only.)

*This note  
does not  
appear in  
County  
manuals.*

In 1966, the Wisconsin Legislature passed the Water Resources Act, Chapter 614, Laws of 1965. This legislation created a new comprehensive State and local program for managing the water resources of this State.

A portion of this act created Section 59.971 (see Appendix C) of the Wisconsin Statutes which requires the zoning of shorelands in the unincorporated areas of each county. (Shoreland zoning in the incorporated areas of counties is optional.) Shorelands, as defined by the law, are lands within 1,000 feet of a navigable lake, pond or flowage and lands within 300 feet of a river or navigable stream or to the landward edge of the floodplain, if that distance is greater. Administered by the Department of Natural Resources (DNR), the shoreland zoning program is aimed at controlling water pollution, protecting fish habitat, and regulating structures and land uses within shoreland areas.



To comply with the Water Resources Act, it was necessary for counties to enact shoreland regulations including zoning provisions, land division controls, sanitary regulations, and administrative provisions ensuring enforcement of the regulations. In the discharge of its responsibility under ss. 59.971 and 144.26, Wisconsin Statutes, the DNR requires adherence to certain specific standards and criteria. The standards and criteria were adopted as administrative rules by the DNR and are contained in Chapter NR 115, Wisconsin Administrative Code (see Appendix C). The rules also define the objectives of the regulations.

# The Zoning Administrator

## General Information

### Who is the Zoning Administrator?

The zoning administrator is the City or Village <sup>county</sup> employee responsible for administering the zoning ordinance as it is written. Approval for certain activities not explicitly allowed by the ordinance must come from the Board of Appeals and/or Planning Commission - not the zoning administrator.

Adjustment Planning + Zoning Committee

### General Responsibilities

General duties of a zoning administrator include:

- Advising applicants of ordinance provisions and assisting them with permit forms.
- Issuing permits where allowed by the ordinance.
- Assisting appellants with appeal forms.
- Transmitting appeal forms and case records to Board of Appeals. <sup>Adjustments</sup>
- Inspecting properties for compliance with zoning ordinance.
- Reporting violations to Planning Commission and the City or Village legal officer. <sup>Planning + Zoning Committee</sup> <sup>county</sup>
- Issuing notices for hearings, appeals, etc. when not handled by the Board of Appeals. <sup>Adjustments</sup>
- Keeping complete records of permits issued, inspections made and other official actions.

## Duties of the Zoning Administrator

### PERMITS

#### Permit Applications

Anyone wishing to develop in a floodplain area must obtain a permit application form from the local zoning administrator, fill it out, and submit it for approval before beginning any development activities. (See Appendix A for a sample permit application form.) An important function of the zoning administrator is to assist landowners (or agents) with their permit applications so that all forms are as complete and accurate as possible. This helps to avoid processing delays while saving the applicant, and taxpayers, time and money.

If the proposed project is in a floodplain, the permit applicant may also need to submit adequate data for the zoning administrator to use in determining the effect of the project on future flood levels. This data is explained in detail in Chapter 6, Special Helps.

If the project is near a lake or stream, the ordinary high-water mark (OHWM) must be determined. The OHWM is the point from which the setback distance is measured and sets forth the jurisdictional limits of the shoreland zone. DNR Area or District office staff are available to help zoning officials locate the OHWM.

### Review Permit Applications

Reviewing a permit application is one of the most important responsibilities of the zoning administrator. Many zoning administrators use a permit review checklist to help them determine if the proposed project meets the criteria of the ordinance. The checklist should include factors such as:



1. Is the project in a floodplain area?

The zoning administrator must first determine if the proposed project is in a special flood hazard area or a shoreland area. If this is not obvious when using a map, an on-site inspection may be necessary. As a result of an on-site inspection, the zoning administrator may find the zoning map is inaccurate. If this is the case, and the proposed project is in a floodplain area according to the map, the zoning administrator should file a map amendment request to the Planning Commission to officially correct the mapping error. Until the amendment is approved by the Commission, the zoning administrator must continue to use the existing map.

*Planning  
+ Zoning  
Committee*



2. Is the application complete?

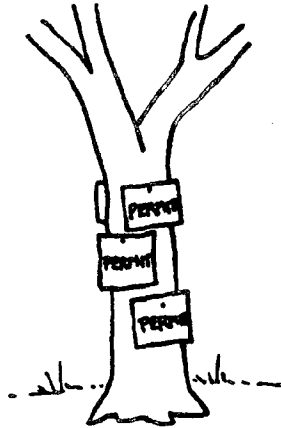
The zoning administrator cannot properly review an application if it is not complete. The application must include a thorough description of the proposed development, and provide enough data to determine if the project will comply with all ordinance provisions. If the application is incomplete or additional data is needed, the zoning administrator can ask the applicant for more information.



3. Have all other applicable permits been obtained?

Quite often, more than one permit is required to complete a certain project. It is the applicant's responsibility to ensure that all applicable local, State and Federal permits for the

proposed project are acquired. The zoning administrator should issue the land use permit only after the additional required permits are obtained.



4. If the project is in a floodplain, will it be safe from flooding? Will it raise future flood levels?

To review an application for a proposed project in a floodplain, the zoning administrator must analyze whether the project will be protected from floods and whether it will affect future flood levels. The first necessary piece of information is the elevation of the regional flood. If the community has a Flood Insurance Rate Map (FIRM) and a Flood Insurance Study (FIS), flood data for the development site is readily available. If no detailed technical data has been supplied to the community, the zoning administrator must determine the elevation from the best informational available. The applicant is responsible for supplying the data necessary to conduct an analysis. (See "Field Data Needed for Floodplain Determination" in Chapter 6.) Many other agencies and reports are available to help the applicant or zoning administrator develop this data.

*This sentence not in county manual.*

(For a list of these agencies, See "Where to Go For Help" in Chapter 6.)

The zoning administrator must ensure there is an analysis of the affect of the proposed development on future flood heights. This is analyzed using an equal degree of hydraulic encroachment on the opposite side of the stream or river. The reason for this is to assure that property owners up, down, or

across the stream or river will have the same rights to encroach on the floodplain. If the analysis shows that the development will raise the regional flood level by more than 0.1 foot, the permit must not be issued. (Some ordinances may be more restrictive than 0.1 foot.)

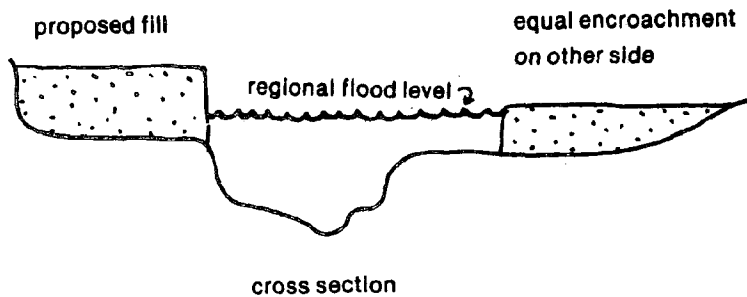


Fig. 4.1 Equal Degree of Hydraulic Encroachment

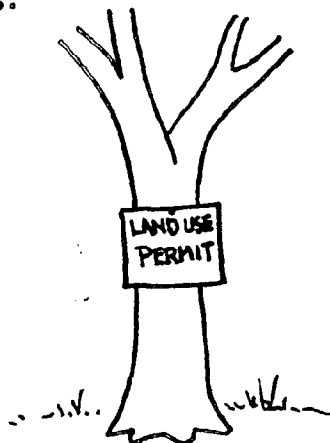
If the project will not raise flood levels, the zoning administrator may then review the development in relation to the flood hazard, and determine if it will be safe from flooding. If the first floor elevation of the project is below the regional flood elevation, then it will be subject to damage during a flood. A permit must not be issued unless the project is raised on fill to protect it from floods, and it must not increase the flood hazard to other areas.

#### Acting on the Permit Application

Following a complete review of the permit application, the zoning administrator may:

1. Approve the permit.
2. Approve the permit on the condition certain modifications are made to comply with the ordinance.
3. Deny the permit.

If the zoning administrator approves an application for a permitted use in the floodplain, <sup>or shoreline</sup> a land use permit must be issued to the property owner. This permit must be posted on the property in an obvious position, to notify enforcement officials and the public that the work has been cleared through the proper channels.



## Appeal Rights

When the zoning administrator denies a permit, the property owner has the right to appeal the decision to the Board of Appeals.<sup>Adjustment</sup> Likewise, if a permit is granted and neighboring property owners or other "aggrieved" persons wish to object, they also have the right to appeal to the Board of Appeals.<sup>Adjustment</sup>

The Board is authorized by law to grant a variance from the dimensional standards of the local ordinance in specific cases, for specific reasons. (Any use changes could only be accomplished by amending the ordinance. Amendments are discussed later in this manual.) The zoning administrator should advise the applicant of the right to appeal, and assist him or her in filling out the appeal form. An example of an appeal form is included in Appendix A. Many ordinances place a time limit on the appeal process (usually 30 days), so the zoning administrator should advise the applicant to promptly exercise that right.

*County manual says Board of Adjustment in each case.*

## Zoning Administrator's Responsibility in Appeals to the Board

If an applicant decides to appeal a denied permit, the zoning administrator assists the applicant in filling out the appeal form, and files it with the Board of Appeals.

Hearings before the Board are similar to a court trial, with sworn witnesses and decisions based on the evidence and specific standards, although the parties are not required to be represented by attorneys. (For details on the hearing process, see the following section on the Board of Appeals.) Because of the quasi-judicial nature of the appeal procedure, the zoning administrator must be sure that the appeal application is complete. The zoning administrator must provide the entire file concerning the case, including the following information:

1. Application number
2. Location of premises -
3. Type of structure or use
4. Zoning administrator's reasons for denial
5. Section of ordinance
6. Zoning district involved
7. Action requested by application (variance, special exception, interpretation)
8. Reasons why the request should be granted

State law requires that a class 2 notice under Chapter 985, Wisconsin Statutes, be given of the time, date and place of each hearing.

The Board of Appeals may delegate the notification responsibilities to the zoning administrator. (Details of the class 2 notice requirements are given in the "Meetings and Hearings" section of this chapter.) The Board may also request the zoning administrator to testify at the hearings.

In summary, once a permit is denied, the zoning administrator is always required to:

1. Advise applicant of the right to appeal.
2. Assist applicant with filling out the necessary forms.
3. File the information with the Board of Appeals.

The zoning administrator is usually required to:

1. Have the hearing notice published.
2. Distribute the hearing notice to parties in interest.
3. Present facts at the hearing.

#### SPECIAL EXCEPTION PERMITS AND AMENDMENTS

The zoning administrator has little responsibility in the special exception permit or the amendment procedures beyond advising the applicant of the proper course of action to take, and forwarding the applications to the proper governing body. A general understanding of these processes is useful, and are described in the following sections on the Board of Appeals and Planning Commission.

ENFORCEMENT *Planning Zoning Committee*

*Board of Adjustment*

#### Inspections

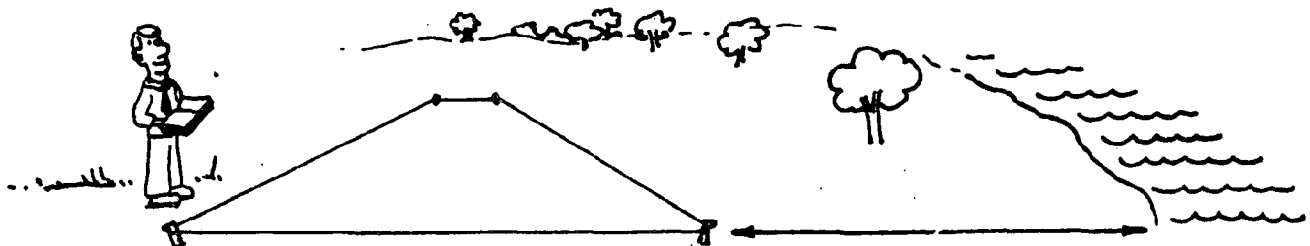
Inspections are necessary to assure proposed and ongoing projects are in compliance with the ordinance. At a minimum, project site inspections should be made at the following times:

- 1) Before issuing the land use permit.



WHY? This will give the zoning administrator a better idea of what the owner proposes to do, and how it agrees with the terms of the ordinance.

- 2) When the outlines of any building and accessory structures have been staked out on the ground.

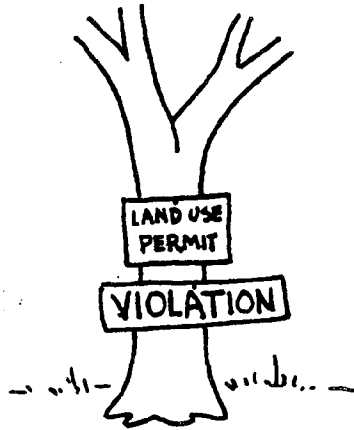




## Violations

Action on an alleged zoning violation is usually initiated by:

- 1) The zoning administrator; or
- 2) A complaining citizen



To initiate enforcement action the zoning administrator should:

- 1) Investigate.
  - inspect the site
  - take photos of the site (noting time of day, direction, etc.)
  - if there is a violation, note it on the Complaint or Notice of Violation form
- 2) Fill out the Notice of Violation form or complete the Complaint form filed by a complaining citizen (see examples of these forms in Appendix A). Be sure to:
  - describe the violation and its location
  - identify the person making the complaint
  - reference the section(s) of the ordinance violated
- 3) Distribute copies of the Complaint or Notice of Violation form to:
  - *Board of Adjustment* *Planning & Zoning Committee*
  - Board of Appeals and the Planning Commission
  - *City or Village Legal Officer* *District Attorney or Corporation Counsel*
  - Property owner
  - DNR Area or District office if the violation is in a floodplain area
  - Keep a copy for zoning administrator files

NOTE: Some communities have adopted a citation ordinance which authorizes the zoning administrator and other local officials to issue citations to start an enforcement action to impose a forfeiture on the alleged violator immediately, without going through the enforcement process described here. The statutory authority for adopting such an ordinance is found in s. 66.119, Wisconsin Statutes.

4) Notify the violator by either:

- a) Notifying the property owner or the owner's agent by letter, or
- b) Posting a violation notice on the premises.

The preferred method is to notify by certified mail, with a return receipt. But if a property owner is difficult to locate, posting may be necessary (see example in Appendix A).

*District Attorney or Corporation Counsel's office*  
The City or Village Legal Officer may take further action once they are notified of the violation. Voluntary correction of the violation is preferred to legal action (prosecution/enforcement). If the property owner agrees to correct the violation, the zoning administrator will need to inspect the property to make sure the violation has been corrected.

#### RECORD KEEPING

Record keeping is an extremely important part of the zoning administrator's responsibility in administering local zoning programs. All official actions must be completely documented in a file record so the Planning Commission, Board of Appeals, and perhaps the courts, can make well informed decisions. Specifically, the following records must be kept on file and open for public inspection:

*Planning &  
Zoning  
Committee  
& Board  
of Adjustment*

- a. A complete and up-to-date copy of all zoning ordinances, maps, etc.
- b. If the community is participating in the Flood Insurance Program, it is required to record the elevations of the lowest floor (including basements) of all new or substantially improved structures in a flood hazard area. For floodproofed structures, the elevation to which they have been floodproofed must be obtained and recorded.
- c. A project file should be kept for each development permit application. The file should contain:

- The permit application
- The permit review checklist
- Copies of all pertinent correspondence relating to the project
- Any appeal or petition proceedings, including a published class 2 notice of the hearing, hearing minutes, and the written decision
- Documentation of inspections
- Subdivision data (if necessary)
- A copy of the Certificate of Compliance

A recommended procedure is to keep a daily log of permit applications. The log should list such information as:

- Date of application
- Applicant's name
- File number
- Type of permit
- Brief project description
- Cost of permit
- Payment date and receipt number

*Planning  
Zoning  
Committee*

The zoning administrator should also keep logs for the *Board of Adjustment* and Planning Commission listing the appeal and petition applications filed. The log should include:

- Applicant's name
- Hearing or petition number
- The township and zoning district
- A legal description
- Hearing date
- Board or Commission written decision

# *Adjustment* The Board of Appeals

[NOTE: Much of the material and case examples found in this chapter has been taken from Zoning Boards of Adjustment/Appeals, prepared by the Department of Governmental Affairs, the University of Wisconsin, Madison.]



## General Information

Need: Since a zoning ordinance cannot anticipate every land use question that will arise in a community, there needs to be some mechanism to give the ordinance flexibility. The Board of Appeals' authority to grant variances serves this purpose. Chapters NR 115 and NR 116, Wisconsin Administrative Code, require counties to appoint a Board of Appeals.

Purpose: Several types of quasi-judicial zoning decisions are decided by a commission or board rather than by the zoning administrator. These are the variance, the special exception (also known as "conditional use") permit, and the administrative appeal. The Board of Appeals is usually the local governmental unit responsible for handling all these cases. (Under s. 62.23(7)(e), Wisconsin Statutes, special exceptions may also be granted by the Planning Commission.)

*Planning Zoning Committee*  
The Board of Appeals interprets the meaning of the zoning ordinance and hears appeals for variances and special exceptions (conditional uses), and grants them where appropriate. While performing this function, the Board should not make the mistake of favoring the individual at the expense of the general public. Only by closely following the procedures established by law and

*the County Board of*

*Note: Where ever the  
CIV manual says  
Board of Appeals the  
County version says  
Board of Adjustment.*

interpreted by the courts can the Board successfully navigate the narrow path between avoiding unnecessary hardship and protecting the public welfare in community land use issues.

*County Board* Who is the Board of <sup>Adjustment</sup> Appeals? The Board of <sup>Adjustment</sup> Appeals is a quasi-judicial body appointed by the Mayor of the City or Village. The law specifies that the Board must consist of five members. *The Board of Adjustment consists of 3-5 members, all living within unincorporated part of county, no 2 from same town.*

*County Board* How are Board members selected? The members of the Board of Appeals are appointed by the Mayor, (subject to confirmation by the City Council or Village Board.) Their terms of office are staggered so that not more than two members will be appointed in any year. *(Only one successor in any year if the Board consists of 3 members.)*

How does it work? The Board functions in a quasi-judicial capacity when conducting hearings and making decisions. Cases handled by the Board must be given procedural due process. This means that every individual has the right to procedural fairness when a government decision is being made that affects the individual's constitutionally protected interests (such as liberty or property). A court can reverse the Board's decision on procedural grounds alone if a plaintiff can show that the Board did not follow correct procedures in handling a case. Normally, however, the court will uphold a Board decision if procedures were followed correctly.

#### Duties of the Board of Appeals

*59.971 and 59.99*  
Section 62.23(7)(e)7, Wisconsin Statutes, grant the Board of <sup>Adjustment</sup> Appeals the following powers:

- a. To hear and decide appeals where there is an ALLEGED ERROR in any order, requirement, decision or determination made by an administrative official in the enforcement of, or any zoning ordinance adopted pursuant to those Statutes. *s. 59.97 or 59.971, Wisconsin Statutes*
- b. To hear and decide SPECIAL EXCEPTIONS to the terms of the ordinance upon which the Board is required to pass as specified in the ordinance. *(Power to decide special exceptions is not limited to the Board of Appeals. The Planning Commission and the City Council or Village Board may also grant special exceptions. The zoning ordinance must specify which body has that responsibility.)*
- c. To authorize upon appeal in specific cases such VARIANCE from the terms of the ordinance, where owing to special conditions, a literal enforcement of the provisions of the ordinance will result in unnecessary hardship. A variance must observe the spirit of the ordinance and must not be contrary to the public interest. Only the Board of <sup>Adjustment</sup> Appeals may grant variances.

A discussion of each of these duties follows.

## ALLEGED ERRORS or (Administrative Appeals)

Administrative appeal, or appeal of an alleged error, occurs when the application for a zoning permit asks the Board of Appeals <sup>Adjustment</sup> to overrule the zoning administrator who has allegedly made a mistake in interpreting a provision of the zoning ordinance. The usual circumstances are:

1. A permit is denied based on the zoning administrator's interpretation of the ordinance. The permit applicant may see a different interpretation and appeals the matter to the Board of Appeals. Adjustment
2. A permit is denied based on the zoning administrator's interpretation of district boundaries on a zoning map. For example, shoreland district boundaries are established by measurement back from the ordinary high-water marks of lakes and streams. The boundaries of wetland areas may be irregular and difficult to locate. The zoning administrator must make an initial determination of the location of these boundaries in order to make a decision on the application. If the applicant is dissatisfied with the zoning administrator's determination, he or she may appeal it to the Board of Appeals. Adjustment

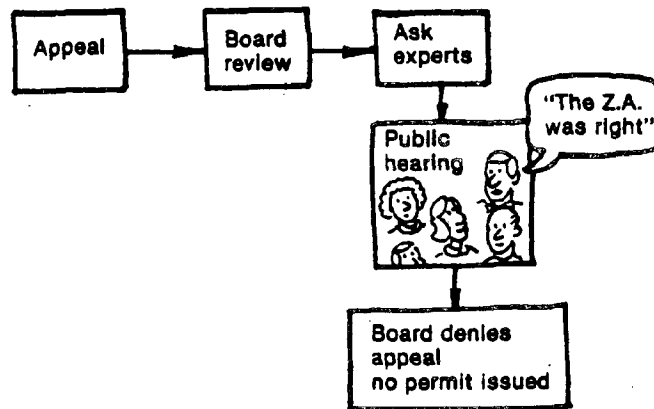
### Criteria

When a zoning permit is denied based on the zoning administrator's interpretation of the ordinance, and the permit applicant sees a different interpretation (one which would allow the permit to be granted) and appeals the matter, the Board of Appeals <sup>Adjustment</sup> must decide whose interpretation is "correct."

In making decisions on alleged errors, the Board should focus on the legislative intent of the zoning ordinance. Although its determinations are quasi-judicial in nature, the Board functions primarily as an administrative arm of the City Council or Village Board. Its duty is to preserve the meaning and intent of the zoning regulations, so far as these can be determined. Most ordinances contain an interpretation or compliance section which states that the provisions contained in the ordinance shall be considered minimum requirements, and shall be liberally construed in favor of the governing body (the City Council or Village Board).

In cases of a disputed district boundary, an engineer, surveyor or soil scientist may be consulted to provide needed technical information. The Board of

Appeals may also rely on assistance from other local, State or Federal agencies, boards, commissions or staff in the discharge of their duties.



Processing an Alleged Error

If a permit applicant feels the zoning administrator made a mistake in interpreting the ordinance or a zoning district boundary, he or she may appeal the decision to the Board of Appeals. The Board chairperson schedules the hearing, gives proper notice, and follows the correct procedures for conducting a hearing and notifying the permit applicant of the Board's decision. This process is outlined in more detail later in this chapter.

SPECIAL EXCEPTIONS: (also called Conditional Uses):

A special exception is a kind of use that can only be allowed after administrative approval by the Board of Appeals (or, depending on the terms of the ordinance, the Planning Commission or the City Council or Village Board).

A special exception is different from a variance. While a variance allows an owner to use his or her property in a manner forbidden by the ordinance, a special exception is expressly permitted--but with certain conditions--in the text of the ordinance. Unnecessary hardship does not need to be proven. Uses classified as special exceptions are not inherently inconsistent with others in the zoning district, but may create special problems or hazards if allowed without special conditions.

A special exception is not an administrative appeal. The first time the permit applicant gets a decision on a special exception is from the Board of Adjustment Appeals. The zoning administrator has the applicant fill out a special exception permit form, and refers the application to the Board.

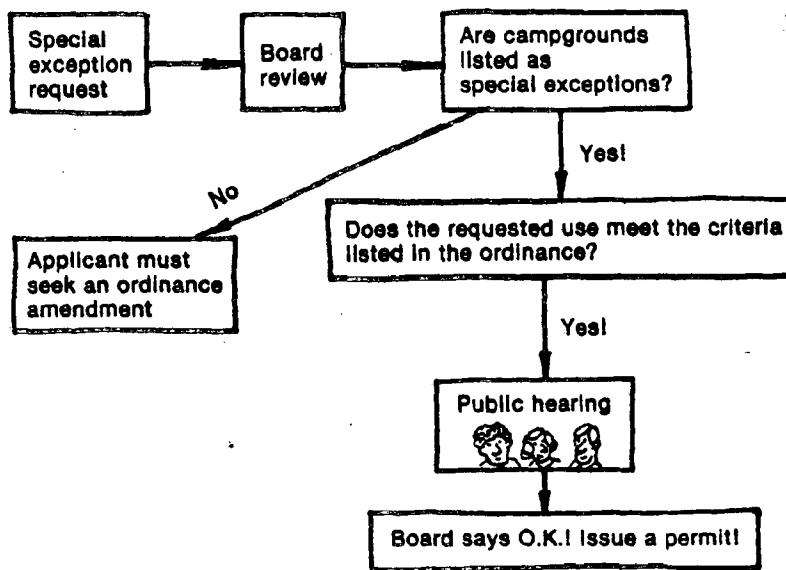
## Criteria

To be considered a special exception, the use must be listed as such in the floodplain zoning ordinance, along with the standards and conditions which must be met. The conditions are provided to protect adjacent landowners, to handle troublesome uses, and to preserve the character of the surrounding area. The conditions should be clearly spelled out in the zoning ordinance, but occasionally some matters of discretion will be left to the Board. The Board must determine each case carefully to avoid charges of making "arbitrary and capricious" decisions. The Board cannot legally allow a special exception if the conditions listed in the ordinance or required by the Board do not exist or cannot be met.

*The conditions for shoreland special exceptions are set out in § 18.43 of the Shoreland Model Ordinance*

The Floodplain Model Ordinance does not list special exceptions within floodplains. Instead, uses are classified as either permitted or prohibited. (Some community ordinances may list certain special exceptions in their floodplain ordinance.)

*( ) →  
not in  
county  
version*



## Processing a special exception request

When an individual requests information on the permits required for a proposed land use, the zoning administrator may determine that the proposed use is listed as a "special exception" in the zoning ordinance. The zoning administrator assists the individual with a special exception application form and refers it to the Board of Appeals for a decision. The Board must conduct a

*Adjustment*



public hearing, and give written notice to the applicant of its decision. (See the "Meeting and Hearings" section of this chapter for details on hearing procedures.)

Forms to use in processing special exceptions include:

- Land use permit application
- Special exception application
- Notice of public hearing
  - for publication
  - for direct mailing
- Certificate of notice publication
- Special exception permit

Examples of several of these forms are included in Appendix A.

The Board has several options when making its final determination on applications for special exception permits. It may:

- 1) reject the application entirely;
- 2) approve the application in full or in part; or
- 3) approve the application subject to additional reasonable conditions or modifications.

Additional conditions which may be imposed by the Board as a requirement for the special exception permit include landscaping, specified periods of operation, increased setback and yard dimensions, erosion protection measures, etc. Following the public hearing on the special exception request, the Board must notify several parties of its decision. The decision and notification procedures are described in the "Meetings and Hearings" section of this chapter.

#### VARIANCE

A variance is permission granted by the Board of <sup>*Adjustment*</sup> Appeals to build or develop in a way which is inconsistent with the dimensional standards contained in the ordinance. The variance procedure allows the impact of the general rules to be varied in response to unusual circumstances which constitute "unnecessary hardship." The Board cannot vary the use standards of the ordinance. For example, a variance could not be granted to build a home in a floodway because that type of use is prohibited.

A variance is not a convenience to the property owner. Nor should a variance be granted for reasons common to other properties. (The appropriate remedy would be an amendment to the ordinance.)

## Criteria

County  
Board

In deciding variance requests, the Board of <sup>Adjustment</sup> Appeals acts as the agent of the City Council or Village Board, not the property owner. It is the Board's duty to preserve the zoning ordinance without modification as far as possible without injustice to the individual.

Variances are intended to be granted infrequently. The applicant for a variance must make a clear showing to the Board that his or her request is due to the very unusual qualities of his or her property and that it satisfies the variance standards.

Here are some general rules which Board members should keep in mind.

### 1) Unnecessary hardship must be proven.

Variances can only be granted where, owing to special conditions, a literal enforcement of the provisions of the ordinance will result in "practical difficulty" or "unnecessary hardship" as defined by the Wisconsin Supreme Court in Snyder v. Waukesha County Board of Adjustment. The court said that "unnecessary hardship can best be defined as a situation where, in the absence of a variance, no feasible use can be made of the land." The court defined the circumstances required to exist for the granting of an area variance as "whether compliance with the strict letter of the restrictions governing area, setbacks, frontage, height, bulk or density would unreasonably prevent the owner from using the property for a permitted purpose or would render conformity with such restrictions unnecessarily burdensome." (See "Court Decisions and Legal Opinions" section of Chapter 6 for more details on this decision.)

In no case may a variance be granted solely as a convenience to the property owner. Practical difficulty and unnecessary hardship do not include conditions affecting the lot in question. Unnecessary hardship does not refer to financial gain or loss.

The burden of proving an unnecessary hardship rests upon the applicant, and without such proof, a variance must be denied. The hardship must also be created by the ordinance. If the hardship is self-created, relief by means of variance may not be granted. Such a situation would arise where hardships result from improvements made in violation of the zoning ordinance, either willfully or innocently. This is known as a self-created hardship, in which case a variance cannot be granted.

If an "after-the-fact" permit is requested and denied for not meeting ordinance provisions, the property owner might request an "after-the-fact" variance. The variance request must be reviewed by the Board as if the project did not yet exist. If the variance is denied, the Board should order removal of the project and restoration of the property to its original condition.

- 2) The condition causing the hardship is unique to that property.

Adjustment Suppose a group of property owners applied for a variance based on the same reason. Such matters should be handled through an amendment to the zoning ordinance and not by wholesale application of discretionary power of the Board of Appeals. There is no basis for granting a variance from the provisions of a zoning ordinance unless a particular parcel of land represents peculiar and special conditions.

- 3) The granting of the variance will not be contrary to the public interest or damaging to the rights of other persons or to property values in the neighborhood.

For example, consider an applicant for a land use permit in a residential district who finds that the 30 foot front yard requirement of the ordinance cannot be applied to the particular lot if it is to be used for residential purposes. The lot may be too steep to provide the required yard and still use practical construction methods. In this case, the Board may review the facts relating to the particular lot and might permit the front yard requirement to be reduced from 30 feet to 20 feet without destroying the intent of the ordinance. But, the Board first must determine that the 20 foot front yard on this single property will not significantly disrupt the appearance of the neighborhood or block the vision of the adjoining neighbors or conflict with any of the other purposes which support the general setback rule of 30 feet.

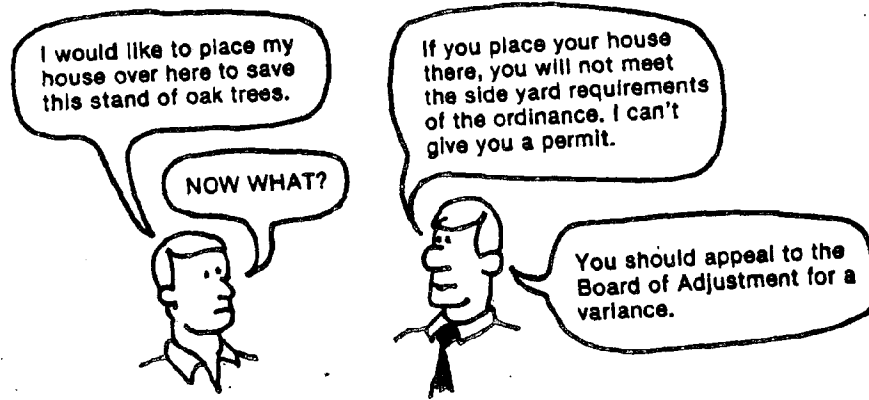
- 4) Variations are not changes in the ordinance. They are rather, modifications in the application of a provision of the ordinance to a particular parcel of land.

In the above example, the ordinance, on its face, still requires a 30 foot front yard in the residential district. Permission to decrease the yard size to 20 feet extends only to the property which was the subject of the variance.

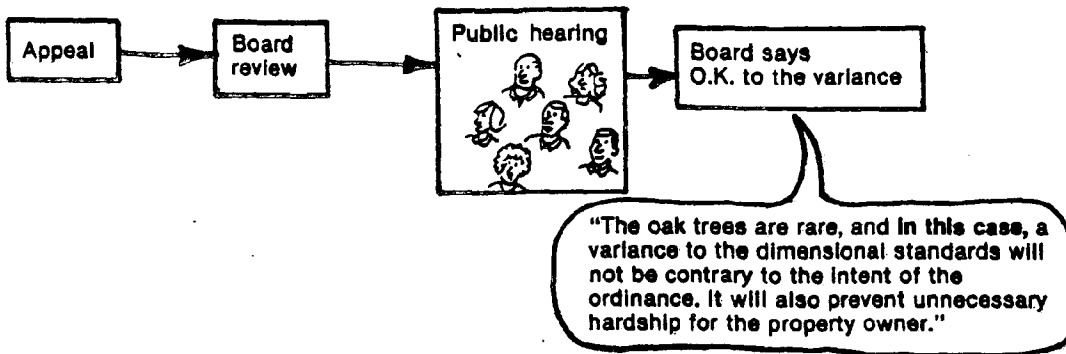
- 5) No variances shall be granted simply because there are no objections, or because those who do not object out-number those who do; nor for any reason other than a proved hardship.

Just because there are no objections expressed to a request at a public hearing doesn't provide justification for granting a variance. A variance is only allowed in "unnecessary hardship" or "practical difficulty" cases that were not self created. The Board must also clearly state in their decision how the applicant has demonstrated unnecessary hardship or practical difficulty before they can grant a variance.

Processing a Variance Request



When an applicant requests a permit for a use requiring a dimensional variance, the zoning administrator must deny the permit and state the reasons for denial in writing. The zoning administrator should then advise the applicant of his or her right to appeal to the Board and request a variance to the terms of the ordinance. If the applicant does formally appeal, the Board schedules and makes proper notice of a hearing (see the "Meeting and Hearings" section of this chapter for procedural details of a public hearing). Following the public hearing, the Board uses the criteria listed above to decide on the variance request. The applicant is then notified in writing of the Board's decision. An example of a written Board of Adjustment decision is given in the "Case Examples" section of Chapter 6. (A Board of Appeals decision could be written in the same manner as that shown for a Board of Adjustment decision.) *not in County version*



# The City or Village Planning Commission

[NOTE: Much of the material found in this section has been taken from Reviewing, Recommending, and Regulating, prepared by the Department of Governmental Affairs, the University of Wisconsin, Madison.]



## General Information

Need: Community planning was originally conducted on a rather informal basis. Almost any group or individual could initiate and conduct a planning program. Today, planning is widely recognized as a legitimate function of government, and is carried out in a more formal, institutional format. In cities and villages, this format is the Planning Commission. *Planning + Zoning Committee*

Wisconsin law requires the City Council or Village Board to create a planning agency whenever it is considering the adoption of a zoning ordinance. This agency may be any previously established committee of the Council or Board, or a special committee as authorized by s. 62.23, 59.97 Wisconsin Statutes. *County Board*

*County Board*

Purpose: The Planning Commission is the local government body charged with handling various planning responsibilities in the community. Its primary function is to advise the City Council or Village Board on planning matters. As an advisor, the basic responsibility is to develop community plans which reflect local policy, and serve as a decision-making guide for the Community. *County Board*

A major responsibility of the Commission is that associated with regulating land use. The Commission is required by State Statute to review and make recommendations on various zoning and subdivision activities. Depending on the local ordinance, the Commission may also have final approval authority over subdivision plats and special exception permits. *Committee*

P+ZC

Who is the Planning Commission? In Wisconsin, the Planning Commission is made up of seven members or citizens appointed by the City Council or Village Board. Commission membership consists of the following: County Board members appointed by the Board

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>a. The City or Village Mayor</li> <li>b. The City or Village Engineer</li> <li>c. The President of the Park Board</li> <li>d. An Alderman</li> <li>d. Three citizen members (selected by the Mayor).</li> </ul> | <ul style="list-style-type: none"> <li>a. County Highway Commissioner</li> <li>b. County Park Commissioner</li> <li>c. 3 members of the County Board (as selected by the Board)</li> <li>d. 2 citizen members (selected by Board) who reside in and own property in the County.</li> </ul> |
|--|--|

How Does it Work? As indicated before, the Planning Commission is primarily an advisory group to the City Council or Village Board on planning and zoning issues. The Council or Board directs the Commission in its planning activities, which most often relate to local land use issues. The Commission may also be asked to undertake other planning studies such as bike path feasibility, reapportionment, space allocation in municipal offices, etc. County Board

P+ZC

According to the Statutes, the Planning Commission may employ technicians and other staff to help carry out their duties and responsibilities. The staff provides the Commission with advice, data, reports and recommendations. County Board

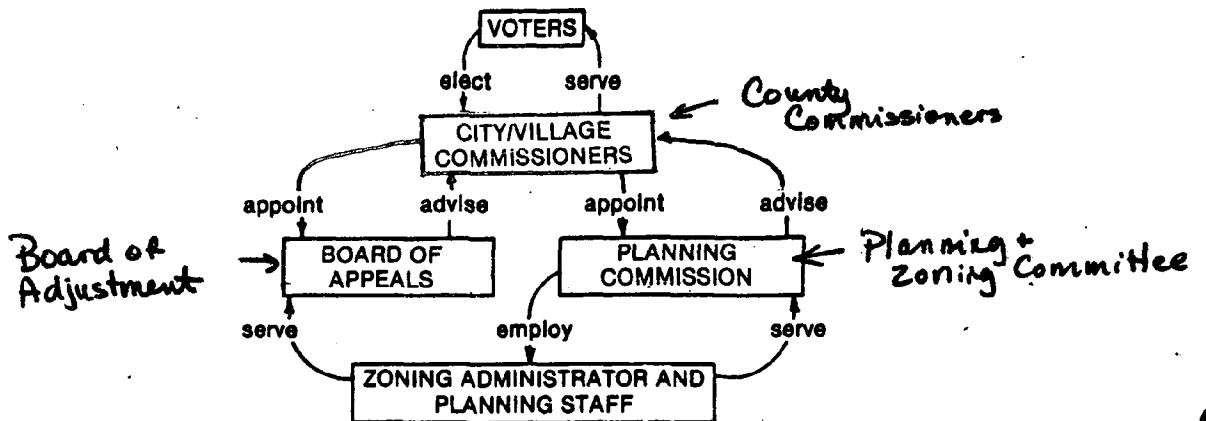
P+ZC

In developing plans, the Planning Commission is to plan on behalf of the community. This means the Commission must continually evaluate the changing resources, values and goals of the community, and advise the City Council or Village Board as appropriate. It is to balance governmental with private interests in developing plans, and act as a liaison between the governing body, the public and the planning staff. County Board

County Board

Relationships between the City Council/Village Board, the Planning Commission, the Zoning Administrator and the Board of Appeals P+ZC

The following diagram summarizes the relationships of the major local government bodies that deal with land use and zoning.



## Planning + Zoning Committee

### Duties of the Planning Commission

<sup>P+ZC</sup>  
The Planning Commission is responsible for duties delegated to it by the City Council/Village Board. These duties usually include:

County Board

- Drafting of zoning ordinances.
- Reviewing proposed zoning ordinance amendments.
- Overseeing the administration of ordinances.
- Overseeing the operation of the planning staff.
- Reviewing land subdivision plats.
- Approving or disapproving special exception (conditional use) permits.

### THE ZONING ORDINANCE

County Boards  
City Councils and Village Boards are authorized to adopt zoning ordinances for areas within incorporated limits of cities and villages. The Planning Commission usually takes responsibility for initial drafting of the ordinances. It also holds public hearings on the proposed ordinance, and may make changes to it before submitting it to the City Council or Village Board for approval. The Planning Commission has similar responsibilities when the community plans to adopt a comprehensive revision or amendment to an existing ordinance.

<sup>P+ZC</sup>

<sup>County Board</sup>

<sup>P+ZC</sup>

### ZONING ORDINANCE AMENDMENTS

When desired projects fall outside the permitted or special exception use classifications, rezoning through an amendment to the ordinance is the only channel for pursuing a permit. Requests for amendments are initiated by a petition and filed with the City or Village clerk. This petition may be filed by:

- 1) Any member of the City Council or Village Board, County Board
- 2) Any member of the Planning Commission, or P+ZC
- 3) Any property owner in the area to be affected by the proposed amendment

For general zoning amendments, members of the affected Town Board may petition for an amendment. But for shoreland and floodplain amendments enacted under ss. 59.971 and 87.30, towns have no overriding authority. Therefore, Town Board members may not initiate rezoning procedures.

P+2C

The clerk refers the petition to the Planning Commission for their review and recommendation.

Typical amendment requests include:

- 1) Amending the zoning district map to rezone a parcel of land from one district to another, and
- 2) Amending the ordinance text to clarify or change a provision.

The amendments can range from minor "mere formality" changes, to major battles between opposing political viewpoints and interest groups. It is the Planning Commission's responsibility to study the facts and opinions, and make a recommendation to the City Council or Village Board on the amendment petition. The Council or Board may heed the advice of the Commission, make a contrary decision, or send the proposal back for further study. The Commission's recommendation must balance the various interests and be consistent with community policies, and promote the best interest of the community.

County Board

P+2C

A public hearing must be held on all amendment petitions. If affected persons wish to protest the adoption of zoning ordinance amendments, they must present a statement of protest to the City Council or Village Board, signed by at least 20% of the affected landowners. No amendment can become effective without the favorable vote of three-fourths of the Council or Board members voting on the change, according to 62.23(7)(d)2, Wisconsin Statutes.

... he or she must do so within 6 months after adoption, according to s. 59.97(14).

While the community has broad authority to amend a comprehensive zoning ordinance, the Council or Board should remember that floodplain zoning ordinances must comply with minimum State standards. Floodplain amendments that are not approved by the DNR are invalid. The State may adopt floodplain regulations on behalf of any county, city or village which fails to adopt reasonable and effective requirements.

County Board

and shoreland amendments that are less restrictive than those on the State standards, may be overridden.

ADMINISTRATION OF ZONING ORDINANCE(S)

P+2C

When drafting the zoning ordinances, the Planning Commission must include provisions for administering the ordinances. The approach generally used in Wisconsin communities is to designate a zoning administrator, a Board of Appeals, Adjustment and a system of permits for all buildings and future land uses.

After the ordinance is adopted and the administrative system established, the Planning Commission has a responsibility to oversee the administration of the ordinance. This duty includes observing the activities of both the zoning administrator and the Board of Appeals. The Commission should pay particular attention to difficulties the administrators are having with poorly written regulations, or changing conditions that make part of the ordinance inappropriate or obsolete. The Commission can perform a very important function by determining, through consultation and study, what is needed to correct the situation. It can then make a recommendation to the City Council or Village Board for needed ordinance amendments.

P+2C Adjustment

County Board



LAND SUBDIVISION PLATS

P+2C

Reviewing subdivision plats is one of the most important responsibilities of the Planning Commission. Subdivision developments are closely regulated because they have a significant impact on patterns of community growth.

Major statutory authority for regulating the subdivision of land in Wisconsin is found in the State platting law, Chapter 236, Wisconsin Statutes. The purpose of this Chapter is to:

"regulate the subdivision of land to promote public health, safety and general welfare; to further the orderly layout and use of land; to prevent the overcrowding of land; to lessen congestion in the streets and highways; to provide for adequate light and air; to facilitate adequate provision for water, sewerage, and other public requirements; to provide for proper ingress and egress; and to promote proper monumenting of land subdivided and conveyance by accurate legal description."

Any municipality which has established a planning agency may adopt ordinances regulating land subdivision under s. 236.45, Wisconsin Statutes. Local ordinances must contain subdivision requirements and standards at least as restrictive as those given in State Statutes and Administrative Codes.

Chapter NR 115, WAC requires counties to review land divisions in shoreland areas which create 3 or more lots of 5 acres or less over a period of 5 years or less.

Proposed subdivisions must obtain the certification of a number of state and local agencies. Under Wisconsin law, these agencies are broken down into two categories: "approving" agencies and "objecting" agencies.

P+2C

a. Approving Agencies: are local government bodies vested with review and approval authority over proposed subdivisions. The platting law permits the local legislative body to delegate final approval authority to the Planning Commission. Normally, the City Council or Village Board retains final approval authority while the Planning Commission reviews proposed subdivisions against local ordinances and makes recommendations to the Council or Board regarding their approval.

P+2C

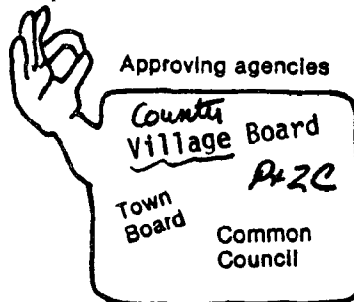
County Board

The following agencies are also considered "approving authorities," and their approvals are necessary before the plat can be recorded:

- 1) The Town Board of the town in which the plat is located (if the plat is within the extraterritorial plat approval jurisdiction of the City or Village).
- 2) The Common Council of a city, or Village Board of a village if the plat lies within the extra territorial jurisdiction of the city or village (i.e. 3 miles from the limits of a first, second or third class city, or 1 1/2 miles from the limits of a fourth class city or village).

( ) not in County version

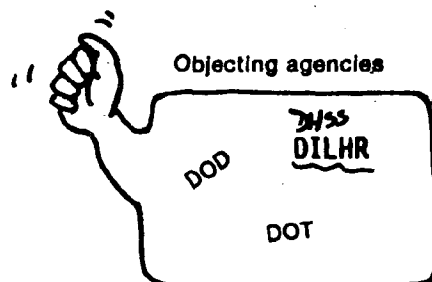
3) Other local or regional planning commissions may have approval authority.



b. Objecting agencies: are almost always a State agency which is required by law to review plats and certify "non-objection" to them. The objecting agencies must complete their review before the approving agencies can complete theirs. The following State agencies have objecting authority over proposed subdivisions, depending on the particular characteristics of that subdivision:

- 1) Department of Development - checks all plats submitted to it for surveying accuracy, checks a few "layout" standards, and serves as a clearinghouse for the reviews by other objecting agencies.
- 2) Department of Industry, Labor and Human Relations - checks only those plats that do not have public sewer service, and reviews the plats against standards dealing with lot size, slope, bedrock and groundwater to assure there is adequate area on each lot for a suitable on-site waste disposal system.
- 3) Department of Transportation - checks only those plats which abut State trunk highways or urban streets which connect segments of State highways. This agency is particularly interested in controlling points of access to State highways or connecting streets, and road drainage.

A certification of no-objection from these agencies is a requirement before the plat can be recorded, and no local authority, such as the Planning Commission, may approve a plat if any of these agencies has made an objection. If the subdivider corrects the reason for the objection, and a second review by the agencies results in no-objections, the approving agencies can complete their review. P+ZC



P+2C

It is the Planning Commission's responsibility to enforce the subdivision regulations adopted by the City Council or Village Board, by withholding approval from plats that do not comply with the regulations. The determination of compliance may involve some extensive field examinations, and the Commission should have staff available to make these surveys. If the Commission has reason to believe that the proposed subdivision may cause problems overlooked by the appropriate objecting agency, that agency should be contacted to conduct any necessary field surveys.

Committee

P+2C

After reviewing the proposed plat, the Planning Commission may recommend that the plat be approved by the City Council or Village Board and may recommend that some additional requirements be imposed. The Community is authorized by s. 236.13, Wisconsin Statutes, to make additional conditions of approval.

County Board

SPECIAL EXCEPTION (CONDITIONAL USE) PERMITS

P+2C

In some jurisdictions, the Planning Commission is designated as the body responsible for approving or disapproving applications for special exception permits. As described in the Board of Appeals section of this chapter, special exceptions (conditional uses) are land uses allowed in a zoning district only after a hearing and approval by the designated body.

Committee

If the Commission denies an application for a special exception, the applicant may appeal the decision to whatever local agency or officer the community has designated. In most situation, the Board of Appeals hears such appeals.

Adjustment

The Attorney General has stated that there is no statutory right to appeal special exception decisions made by the County Planning Committee to the Board of Adjustment. However, an applicant for a special exception permit has the right to appeal an unfavorable Planning Commission decision to the independent appeal body designated by the county pursuant to Chapter 68, Wisconsin Statutes. A county may designate the Board of Adjustment as the independent appeal agency, or it may designate any other independent County board or agency to hear appeals of decisions issued by the Planning Committee (see 69 Opinions of the Attorney General 146, 1980). The reasoning behind this would apply to appeals to the Board of Appeals of special exception permits decided by the Planning Commission, as well.

P+2C  
(see 69  
Opinions of  
the Attorney  
General  
146-1980)

not in  
County  
version

If the decision of the independent appeal body is unfavorable, the applicant may seek judicial review by petitioning for a writ of certiorari under s. 68.13, Wisconsin Statutes.

# Meetings and Hearings

*Adjustment*  
The ~~City Council~~ <sup>County Board</sup> or Village Board must adopt rules for the conduct of business by the Board of Appeals and the Planning Commission. The procedures must provide for a public hearing to gather all facts from both sides. The Board of Appeals and Planning Commission may adopt further rules as necessary.

## Suggested Rules of Order

The following is a set of suggested rules of order for the ~~Board of Appeals~~ <sup>Board</sup> and ~~Planning Commission~~ <sup>Committee</sup>:

### A. Officers

- and Committee*
- 1) The Board of Appeals must elect a chairperson and may elect a vice-chairperson from its membership. The vice-chairperson will serve when the chairperson is absent or unable to serve. (The City or Village Mayor will act as the presiding officer of the Planning Commission.)
  - 2) The Board and <sup>Committee</sup> Commission should each elect one member to act as secretary, to serve until replaced, or they may ask a member of the zoning staff to act as a nonvoting, recording secretary. The secretary should either tape record the meeting, or contract the services of a professional hearing recorder to produce a complete transcript of the meeting.

*-not in County version*

### B. Duties

- chairperson*
- 1) The ~~presiding officer~~ <sup>chairperson</sup> or chairperson presides at all meetings and hearings, and directs the conduct of the sessions.
  - 2) The secretary conducts all official correspondence of the Board of Appeals, receives and files applications, sends out notices and keeps or supervises the keeping of Board or Commission records. The secretary is responsible for recording meeting proceedings and keeping complete written meeting minutes. Staff from the local planning and zoning staff may assist the secretary with these duties.

### C. Rules of Conduct

The ~~City Council~~ <sup>County Board</sup> or Village Board must adopt rules for the ~~Board of Appeals~~ <sup>Board's</sup> conduct of business in accordance with the provisions adopted in the zoning ordinance(s). The ~~Commission~~ <sup>Committee</sup> may adopt its own rules of conduct, subject to change by the ~~City Council~~ <sup>County Board</sup> or Village Board. Further rules may be adopted, including if desired, Robert's Rules of Order.

## Scheduling Meetings and Hearings

- 1) A standard monthly meeting day should be established (e.g. the second Tuesday of each month), along with a standard meeting place, and time to begin.

Board or Committee

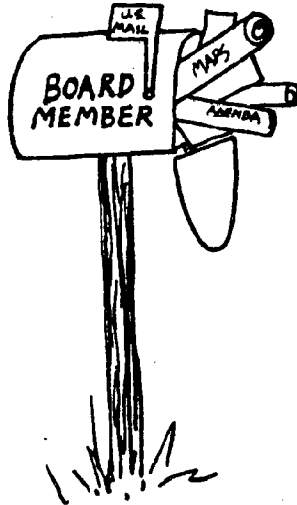
- 2) At any meeting, the Board of Appeals or Planning Commission may set a date for the hearing on any appeal, or application filed with it. The secretary may be asked to schedule the hearings subject to approval of the Board or Commission.
- 3) Any meeting may be cancelled by majority vote of the members at a previous meeting. A meeting may also be cancelled by call of the presiding officer not less than 24 hours before the time established. If a majority of the members request the meeting be held despite the presiding officer's call, the meeting may not be cancelled.  
*at least 3 members (or 2 in case of 3 member Board)*  
*Chairperson's*
- 4) Regular meetings and additional special meetings may be held at times other than the standard schedule, by majority vote of Board or Com-Committee mission members at a previous meeting, or by at least a 24-hour advance call of the presiding officer.

Notification Requirements

- 1) All meetings and hearings must be open to the public except that an executive session may be called at the conclusion of any hearing to reach a decision on the case(s) presented. Hearings must be advertised with a class 2 notice under Chapter 985 and notice as required by section 19.84, Wisconsin Statutes, must also be given.
- 2) The Board and Committee Commission are required by law to publish a class 2 notice for each public hearing to be held. Class 2 notices must appear in a newspaper that is published in the community (or in the "official newspaper" designated by the community), on two consecutive weeks with the last publication occurring at least seven days prior to the hearing. "Due notice" must also be given to the parties in interest by mail. The parties in interest include:
  - a. The applicant (the owner of the property for which a permit is sought, or the owner's agent).
  - b. The appellant or petitioner (the person aggrieved by the action of the zoning administrator, or the municipal officer or agency, that has appealed or filed a petition on the matter).
  - c. The DNR Area or District office if the "issue" is located in a floodplain area.
- 3) To comply with the class 2 notice requirements and the open meeting law, the following information should be published:

- Location and time of hearing
- The applicant/appellant/petitioner's name
- Location of property involved
- Nature of the request
- Time of any deliberative sessions
- Who should attend the hearing (i.e. concerned, affected or interested persons).

- Committee
- 4) Several days prior to the meeting, Board or Commission members should receive an agenda of the order and contents of the upcoming meeting. The agenda should be supplemented by a packet of applications, maps and reports prepared by the zoning staff on matters scheduled to come before the Board or Commission.



#### Conducting the Hearing

The Board of Adjustment and P+ZC Planning Commission are required to hold a public hearing for all administrative appeals, variances, special exception and amendment cases they handle. The purpose of the hearing is to give applicants, appellants, petitioners and interested citizens an opportunity to present their views on a case before the Board or Commission makes a final decision. The hearings should be tape recorded and complete minutes and copies of all maps, charts and other exhibits should be kept.

- 1) The chairperson is responsible for conducting the hearing.
- 2) The chairperson calls the hearing to order and takes a roll call of all the members present.
- 3) The chairperson (or secretary) reads a description of the appeal, application, or petition.
- 4) The chairperson asks for the reasons for denial of the original request, if there was a denial, which may be read by the zoning administrator.
- 5) The chairperson asks the appellant or petitioner to state his or her case and answer questions the Board or Commission may have. If the appellant or petitioner is not present or represented, the case may be tabled or dismissed.

- 6) The chairperson asks if there are other persons who wish to speak in favor of the proposal.
- 7) The chairperson asks for rebuttals or opposition to the proposal.
- 8) When all those wishing to speak have been heard, the chairperson declares the hearing to be closed. If the Board's or ~~Commission's~~ <sup>Committee's</sup> decision is to be rendered at a later date, the chairperson should indicate such to those present at the hearing.

### Deliberative Sessions

A short executive session may be called at the conclusion of any public hearing, or at a later date, to decide a case. All non-Board or non-~~Commission~~ <sup>Committee</sup> members in the meeting room may be asked to leave except the recording secretary and the legal counsel. The Board or ~~Commission~~ <sup>Committee</sup> should review the case and use the appropriate guidelines in voting on a decision. A quorum consists of a majority of all the Board or ~~Commission~~ <sup>Committee</sup> members. No action may be taken without the affirmative vote of a majority of the quorum.

All decisions shall be made in writing and contain the facts upon which the decision is based.

### Follow-Up

Within a reasonable time after the close of the hearing to which the decision relates (preferably not later than 10 days), copies of each decision must be delivered to:

- County Board Supervisor and Town Board Chairman*
- The Mayor of the City or Village.
  - The zoning administrator, with a written order to issue, deny or modify if the decision concerned a permit.
  - The applicant, appellant, or petitioner.
  - Other parties of record.
  - The Area or District office of the DNR if the decision concerned a floodplain.

All conditions imposed upon approving (or recommending to approve) an application, appeal or petition shall be stated in the written decision.

### Report of Activities

The Board of ~~Appeals~~ <sup>Adjustment</sup> is usually required to submit an annual report of its activities during the preceding year to the ~~Planning Commission~~ <sup>County Board</sup>. The Commission transmits the report to the ~~City Council or Village Board~~ <sup>County Board</sup>.

The ~~City Council or Village Board~~ <sup>County Board</sup> may request monthly, quarterly or annual reports from the ~~Planning Commission~~ <sup>County Board</sup> on its activities. These reports should give the ~~Council or Board~~ <sup>County Board</sup> the information it needs to make decisions on local land use and related issues.

*County Board*

# Case Examples

## ALLEGED ERROR - Bob McBuilder

Situation: Bob McBuilder asks the zoning administrator to tell him exactly where the floodplain zoning district boundary is in relation to his property. The zoning administrator informs Bob that the boundary runs right through his land. Bob tells the zoning administrator he's nuts and that the maps were prepared by an idiot. He insists that the maps are wrong and requests a map interpretation. The zoning administrator tells Bob that the maps may be wrong, but the ordinance gives him no alternative.



### Question:

Who settles this dispute?

### Answer:

The BOARD OF <sup>ADJUSTMENT</sup> APPEALS.

1. Bob McBuilder alleges there is an error in the floodplain maps, and files an appeal or request for an interpretation with the zoning administrator.
2. The zoning administrator forwards the matter to the Board of <sup>Adjustment</sup> Appeals.



3. The Board of Adjustment Appeals sets a time for a public hearing and publishes a class 2 notice.
4. The Board of Adjustment Appeals holds a public hearing on the appeal interpretation. Experts (engineers) may be called on to give their technical evaluation of where the flood limits are.
5. The Board of Adjustment Appeals votes on the appeal interpretation.

6. EITHER: ↘ Adjustment  
 The Board of Adjustment Appeals grants a favorable interpretation, and directs the zoning administrator to initiate a map amendment petition to the Planning and Commission. P+ZC

THEN WHAT?

Following an official map amendment, the zoning administrator may issue Bob a permit.

OR: ↘ Adjustment  
 The Board of Adjustment Appeals decides against the appeal interpretation.

THEN WHAT?

Bob may appeal to a court of record.

SPECIAL EXCEPTION - Fred Birchlog

Situation: Fred Birchlog wants to cut a row of trees from his shoreland property to help pay for his property taxes. The trees he wants to cut are within 35 feet of the shoreline. On applying for a permit, he discovers that tree cutting is listed as a "special exception" in the ordinance and must be approved before he can begin cutting.



Question:

Who is responsible for approving or disapproving Fred's application for a "special exception" permit to cut his trees?

Answer:

The BOARD OF ADJUSTMENT or the County P+ZC PLANNING COMMISSION, depending on the ordinance.

1. Application is made to the zoning administrator.
2. The zoning administrator refers the application to the Board of <sup>Adjustment</sup> Appeals or Planning Commission. P+2C
3. The Board or Committee Commission sets a time for a public hearing and publishes a class 2 notice.
4. The Board or Committee Commission holds a public hearing on the special exception request.
5. The request is voted on by the Board or Committee Commission.

6. EITHER: ↘

The request is approved according to the conditions listed in the ordinance.

THEN WHAT?

The Board or Committee Commission directs the zoning administrator to issue a special exception permit to Fred.

OR: ↘

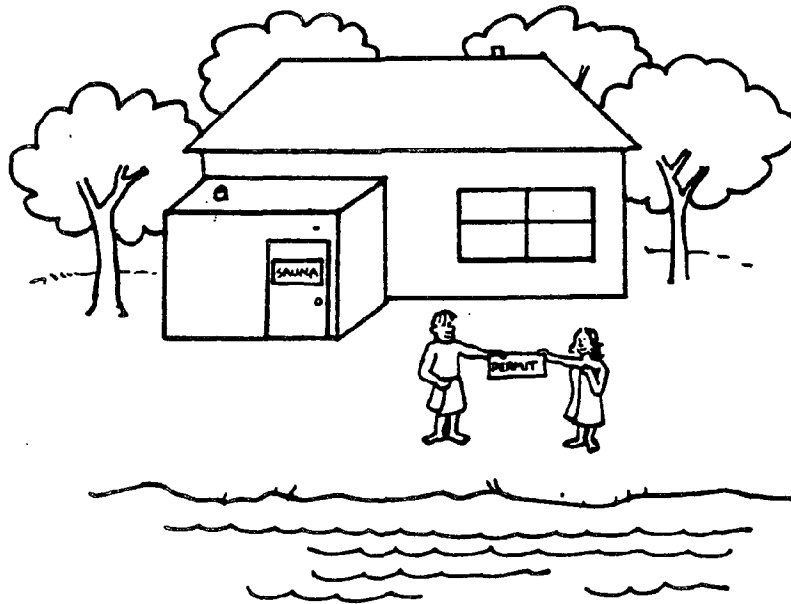
The request is denied

THEN WHAT?

Fred may appeal to a court of record.

VARIANCE - John and Cookie Dough

Situation: John and Cookie Dough applied for a permit to build an addition onto their lake home for a sauna and whirlpool. They wanted the addition to face the lake, which would also save cutting any trees on the property. Unfortunately, the proposed addition would violate the setback requirements of 75 feet from the shoreline. The Dough's claim that strict enforcement of the setback requirements would be an unnecessary hardship, as alternative addition sites would require sacrificing many trees, which would violate the shoreland regulations on tree cutting.



Question:

Who decides whether or not John and Cookie can build their addition as proposed?

Answer:

**ADJUSTMENT**  
The BOARD OF APPEALS.

1. The zoning administrator denies a building permit because the setback requirements of the zoning ordinance cannot be met.

Adjustment

2. Appeal is made to the Board of Appeals for a variance from the ordinance provisions.
3. The Board of Adjustment Appeals sets a time for a public hearing and publishes a class 2 notice.
4. The Board of Adjustment Appeals holds a public hearing on the appeal.
5. The Board of Adjustment Appeals votes on the appeal.

6. EITHER: ↴

The variance is approved as the proposed activity does not violate the intent of the ordinance. The specific criteria is listed in the Board's written decision on the case.

THEN WHAT?

The Board directs the zoning administrator to issue a permit to the Doughs.

OR: ↴

The variance is denied.

THEN WHAT?

The Doughs may appeal to a court of record.

County Planning + Zoning Committee

MEETING MINUTES - Plum City Planning Commission

The following is an excerpt from the "minutes" of the fictitious December 5th meeting of the Plum <sup>County</sup> ~~City~~ <sup>Page 3</sup> Planning Commission. The excerpt concerns a hearing on a proposed amendment, and describes the kinds of issues, arguments and decision which may be faced by the <sup>Committee</sup> ~~Commission~~ during a typical meeting.

Zoning Map Amendment

Petition by Mr. Willy Provit to remove the Flood Fringe district classification from one-half acre of his property.

Mr. Provit described his proposal, explaining that he had filled this property to the regional flood protection elevation and would now like to build a home on the land. He explained that he had followed proper procedures before filling his property by securing the necessary easements, DNR approval and all <sup>Page</sup> required permits. Before he constructs his home, he wants the Planning Commission to amend the zoning map and remove the Flood Fringe designation from his land. This will relieve him of he need to floodproof his home.

Commissioner Birch asked the zoning administrator, Mr. Doright, if the amendment proposal was reviewed by the Department of Natural Resources. Mr. Doright reported that the proposal was reviewed, and that the DNR stated the map amendment was necessary since the original fill project increased the height of the regional flood level by 0.15 foot. The DNR approved the map amendment proposal as submitted, since all flooding easements and other appropriate legal procedures were properly accomplished. Any changes to the original proposal would require an additional review and approval by the DNR before the amendment can become effective.

Commissioner Birch noted that the fill project met the specifications of the floodplain ordinance by being above the flood protection elevation, and contiguous to land outside of the floodplain.

Chairman Bigcheese asked for statements in support of the amendment proposal. There being none, the Chairman asked for statements in opposition to the proposal. Mr. I.M. Crabby, a long time Plum City resident, appeared in opposition to the rezoning. He claimed that Mr. Provit's plans to build a house would encourage other residential development in the neighborhood, which would "bring in more kids and dogs to trample my flowers." Chairman Bigcheese reminded Mr. Crabby that the development itself is not contestable, since the area is zoned Residential. The Flood Fringe District simply overlaps the Residential District.

No further testimony was heard. The Planning Department recommended approval of the rezoning, as all criteria in the floodplain ordinance was met. Chairman Bigcheese reminded Mr. Provit that even though the Plum <sup>County</sup> ~~City~~ Floodplain Ordinance will be amended, the maps used by local lending institutions will still consider his property in a flood hazard zone, for insurance purposes. If he builds any part of his home below the regional flood protection elevation, he will pay higher flood insurance premiums. Chairman Bigcheese advised Mr. Provit to talk to his insurance agent and lender about the matter.

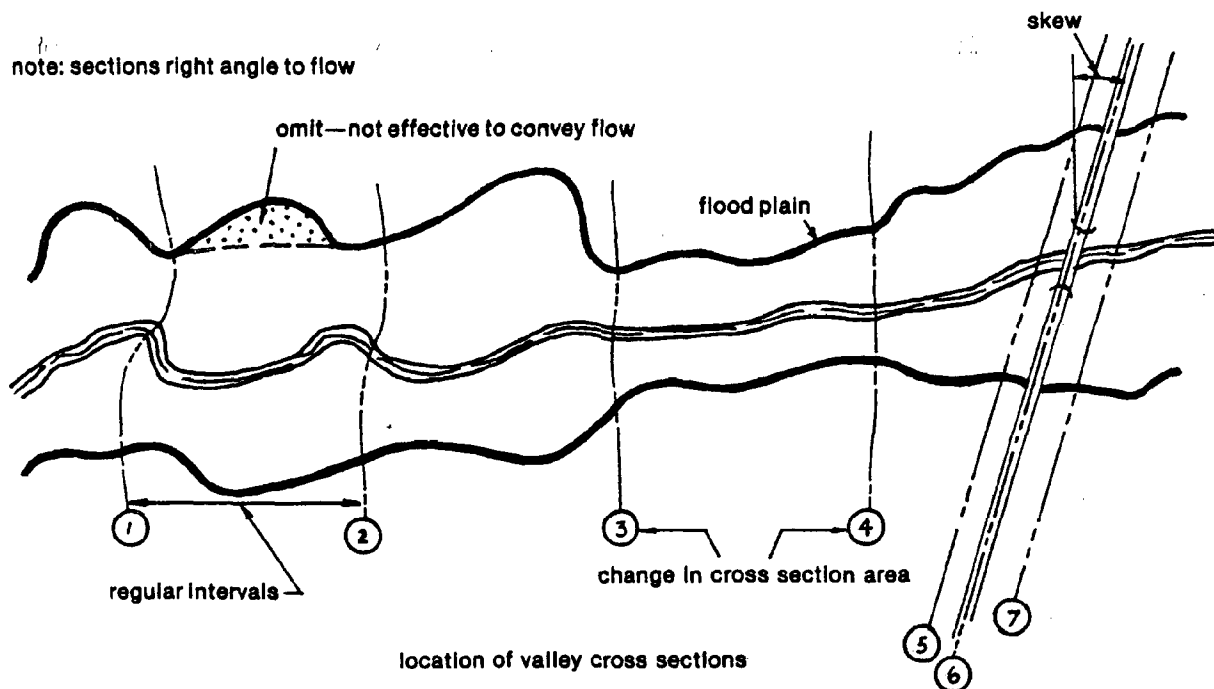
# Field Data Needed for Floodplain Determination

The following data must be supplied by a permit applicant and submitted to the zoning administrator for his or her use in determining the effect of the proposed activity on future flood heights.

## 1. Valley Cross Section

The valley cross section of the channel and overbank area must be taken perpendicular to the flow of the stream. The cross section must extend to an elevation above the expected floodplain. This elevation could vary from 5 to 25 feet above normal water elevations depending on the characteristics of the watershed.

It is important that the cross section be representative of the hydraulic reach of the stream affected by the proposed project. This may mean taking the typical cross section some distance away from the project site. Field notes must document the respective location of the cross section in relation to the project site.



## 2. Stream Slope Information

Water surface elevations should be taken at the project site, and at points, 1,000 feet upstream and downstream from the site to obtain average stream slope information. The elevations must be obtained during non-flooding conditions. If there is a bridge, culvert, dam or abrupt drop in

The Law of Zoning and Planning, A.H. Rathkopf, Clark Boardman Co.,  
New York, New York, 1956.

"Zoning Boards of Adjustment/Appeals: A guide for the newly appointed  
board member," UW-Extension - Department of Governmental Affairs, review  
draft, 1978.

"Zoning Law and Practice in Wisconsin," Richard Cutter, Wisconsin Property  
Law Series - Vol. I, The Institute of Continuing Legal Education, 1967.



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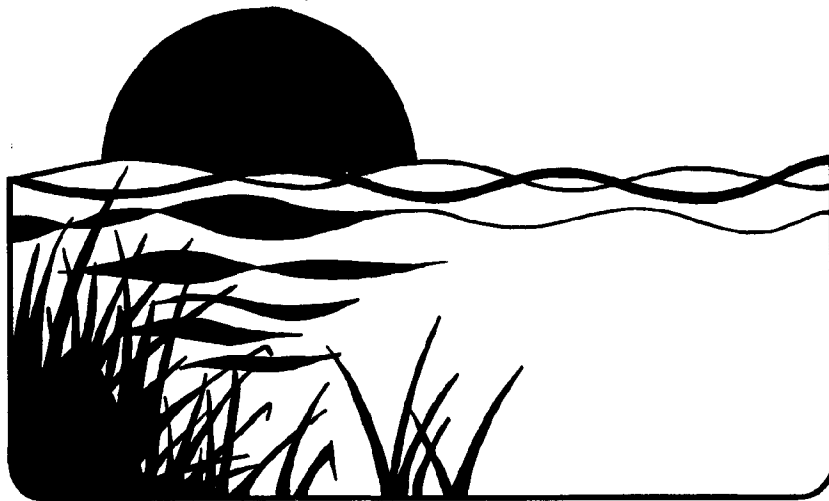
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# FLOODPLAIN / SHORELAND MANAGEMENT



**a guide for local zoning officials**



**Department of Natural Resources  
Madison, Wisconsin**

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# Floodplain / Shoreland Management

## A Guide for Local Zoning Officials

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# **PROTECTING PEOPLE, PROPERTY & RESOURCES: The Rationale for Land Use Regulations in Wisconsin**



The lakes and rivers of Wisconsin are an integral part of the State's beauty and character. These water resources have historically drawn both settlers and visitors. River floodplains have attracted developments which take advantage of the river's navigability, waste processing capacity, and scenic beauty. More leisure time and expendable income have increased pressure on recreational areas, especially lakes, streams and shorelands. The State has recognized the need to protect these resources while at the same time promote wise development.

To deal with these development pressures on Wisconsin's aquatic resources, the Legislature passed two protective measures in its Water Resources Act, Chapter 614, Laws of 1965. The first of these, the shoreland zoning provisions of Section 59.971, Wisconsin Statutes, seeks to preserve the natural, historical, cultural, and scenic resources that are present near lakes and streams. The floodplain measures embodied in Section 87.30, Wisconsin Statutes, on the other hand, seek to protect people's lives, health and property from periodic floods on the State's rivers and streams.



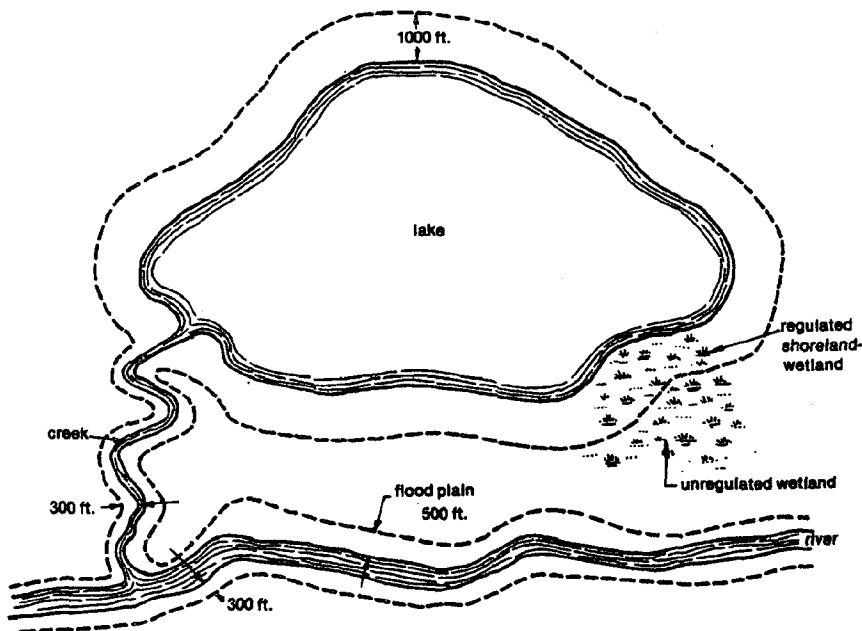
## Shoreland Zoning Protects Aquatic Resources

In the early 1960's, State lawmakers were still concerned with the economic decline from the northern Wisconsin cutover area and sought ways to bolster that area's declining economy. But the Legislature also recognized that uncontrolled development adjacent to lakes and streams could degrade the quality of the water and shorelands.

The new shoreland legislation would:

- prevent and control water pollution,
- protect spawning grounds and wildlife habitat,
- preserve shore cover and natural beauty,
- provide uniformity in placement of buildings and
- maintain safe and healthful conditions.

All Wisconsin counties were required to zone their unincorporated areas lying within 1000 feet of lakes, ponds or flowages and within 300 feet of rivers or streams, or to the landward side of the floodplains, whichever distance is greater. Shoreland properties average 200-300 feet deep so the shoreland area envelops at least three rings of development around lakes and a single ribbon on both sides of flowing, self-cleansing rivers and streams.



Within the shoreland zone, counties must regulate:

- subdivisions,
- sanitary provisions,
- lot size,
- building setbacks,
- tree cutting,
- drainage alterations and
- wetlands.

# Floodplain Zoning Protects People and Property

While there always have been and always will be floods, there were few flood problems until people began occupying floodplains. Yearly flood damages across the nation have steadily increased as development continued to encroach on the floodplains. This occurred in spite of billions of dollars spent on structural measures to try to "control" floods.

Floods are natural occurrences. Ancient civilizations learned to live with, and even depend upon the river's yearly spring flooding to enrich the floodplain. Modern civilization has converted the use of many floodplains from agriculture and open space to residential, industrial, and commercial uses. As more people settled on the floodplain, we built dams, channels and levees to protect people and their property from flood hazards. But these structures are costly and not always effective. Recent management efforts have sought to control development and construction within floodplains rather than to control the river. Zoning and other nonstructural techniques have become the favored and most cost effective measures to prevent flood damages.

Individualists have argued for their right to live wherever they please - including floodplains and other hazardous locations. They've argued that they build on the floodplain at their own risk. But once settled, these people demand residential amenities - roads, sewers, utilities, and emergency services. After they experience a flood, they turn to the Federal Emergency Management Agency, the Army Corps of Engineers or other Federal or State agencies for protective dikes, levees and dams. It's not the individualists who pay for these services and structures, but the general public.

Taxpayers share the costs of:

- flood control projects,
- rescue, relief, and emergency preparedness,
- repairs to streets, bridges and utilities and
- Federal loans and grants to rebuild flood damaged structures.

In addition, local communities bear costs for:

- income lost during business interruptions,
- their non-Federal share of disaster relief (local communities now pay 25%),
- loss of tax base from flood blight areas and
- money shunted to flood rehabilitation rather than invested in new economic development.

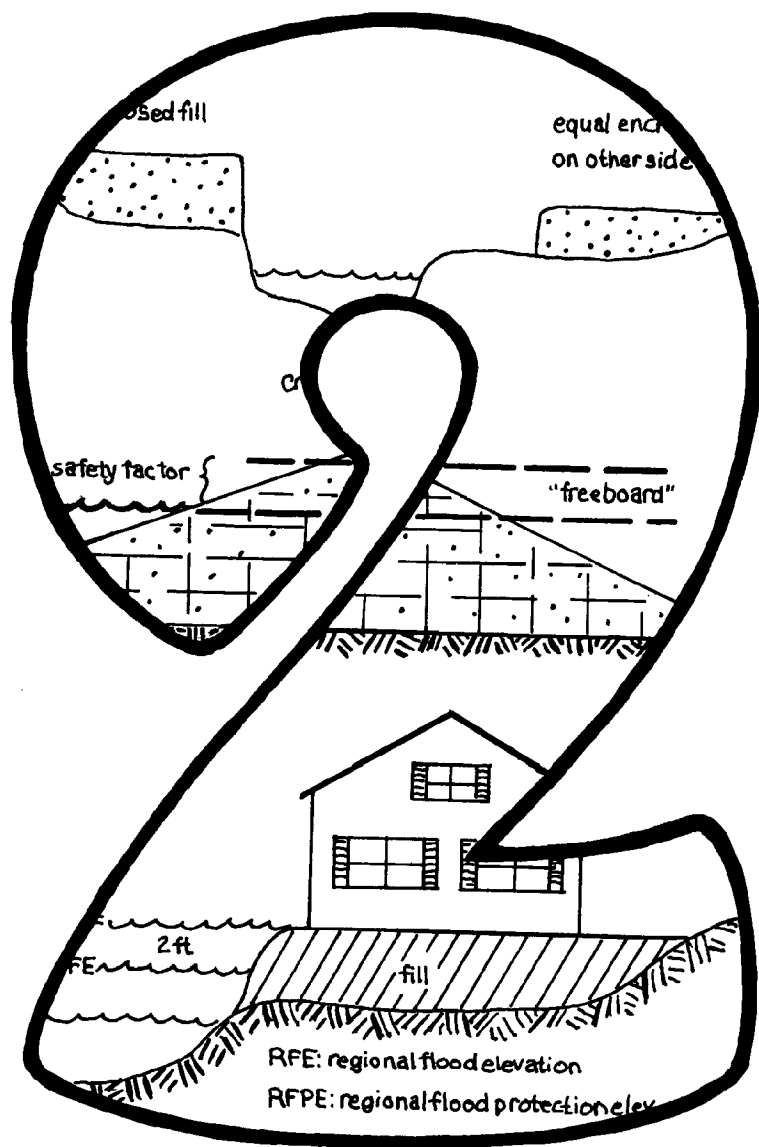
Nationwide flood damage costs exceed \$2 billion per year, and in Wisconsin more than \$100 million per year. The 1965 floodplain provisions of the Water Resources Act recognized that keeping development out of the floodplain was a more effective way to minimize flood damage than building costly, and sometimes ineffective, dams, channels and levees.

## **Local Controls Follow State Guidelines**

The shoreland and floodplain amendments to the Water Resources Act were Wisconsin's first attempts to legitimize the interrelationships between land use and water quality. The new law had to deal with the issue of dividing powers between the State and local governments. Land use controls have traditionally been the domain of local governments, while the State has been guided by the "trust doctrine" to protect its navigable waters. To resolve this issue, the Legislature made both floodplain and shoreland zoning mandatory, but left responsibility for adopting and enforcing the necessary ordinances to local governments. The State DNR was to establish standards and ensure that the local government provide fair and equal treatment to all citizens.

## **Communities Make Progress With Shoreland and Floodplain Zoning**

Wisconsin's shoreland and floodplain programs have won nationwide acclaim for their pioneering visions. And statewide, they have helped local governments gain experience and confidence in exercising land use controls. By 1971, all 71 counties had adopted shoreland zoning. Milwaukee County is exempt because it is completely incorporated. Many counties applied the shoreland program's subdivision and sanitary provisions throughout their unincorporated areas. Fifty two counties and 320 cities and villages had adopted floodplain zoning by 1981. Delays with obtaining adequate maps and engineering data have slowed some county efforts, but the recently enacted floodplain and shoreland-mapping assistance program helps local governments by cost-sharing the expenses of obtaining the necessary maps for effective zoning. More information on this program is included in Chapter 3.



# DESCRIPTION OF TERMS

This section contains brief descriptions of several terms used in floodplain-shoreland regulations. Additional technical definitions may be found in the "Definitions" sections of Chapters NR 115 and NR 116, Wisconsin Administrative Code (see Appendixes B and C).

**Encroachment** - Development of floodplains results in the restriction of natural overflow areas that are needed by streams during flooding conditions. Each development encroaches on the natural overflow area of the stream and increases the regional flood elevation. Development in floodplains is consequently entitled "encroachment."

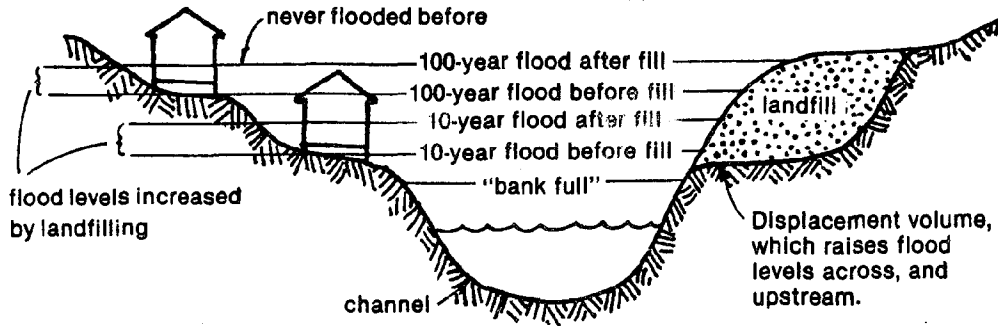


Fig. 2.1 The Effect of Encroachment on Flood Levels

**Flood Crest** - The flood crest is the maximum level reached by the waters of a flood at a particular location along the stream.

**Flood Frequency** - This term refers to the probability of a flood of a certain magnitude occurring in a given year. The larger the flood, the less frequently it is expected to occur. For example, a 100-year flood is larger and less common than a 50-year flood.

A common way to refer to flood frequency is to talk about a percent chance of a particular size flood occurring during some period of time. For example, a 100-year flood is called the "1%-chance" flood, since it has a 1% chance of occurring or being exceeded during any given year. This terminology avoids the misconception that a 100-year flood can only happen once in 100 years. It is possible for a 100-year flood to occur three years in a row or not at all for 500 years. But there is a definite risk of a flood this size occurring any year.

The following table shows the percent chance that a flood of a certain frequency (in years) will occur or be exceeded during any given year.

Flood Frequency	Percent chance of being equaled or exceeded in any given year
1-year flood	100%
10-year flood	10%
30-year flood	3.3%
50-year flood	2%
100-year flood	1%
500-year flood	0.2%

Agencies use many statistical methods to compute flood frequencies. In general, records from stream gauging stations are used to determine peak flood discharges for every year. The flood data is analyzed, and a frequency is statistically assigned for various flood sizes.

**Regional Flood** - The term "regional flood" is another way to reference the 1%-chance or 100-year flood. The term describes the average large floods that have occurred in the region of a particular stream. Because flood records are often incomplete or nonexistent for many streams, records from a broad region having similar physical characteristics can be used to determine flood data for other streams in the region.

The regional (or 1%-chance) flood is commonly used to delineate floodplains because it is large enough to provide a reasonable guide for protection from flood damage or threat to life and health. Yet the regional flood is not so large as to be unnecessarily restrictive on regulated property owners. This flood is experienced every year somewhere in the country, and presents a risk worth planning for. It is the standard used for regulation and planning throughout the United States.

**Regional Flood Elevation** - This is the water surface elevation associated with the crest of the regional flood. It is usually expressed in terms of elevation above sea level of the water in the immediate vicinity, not points upstream or downstream.

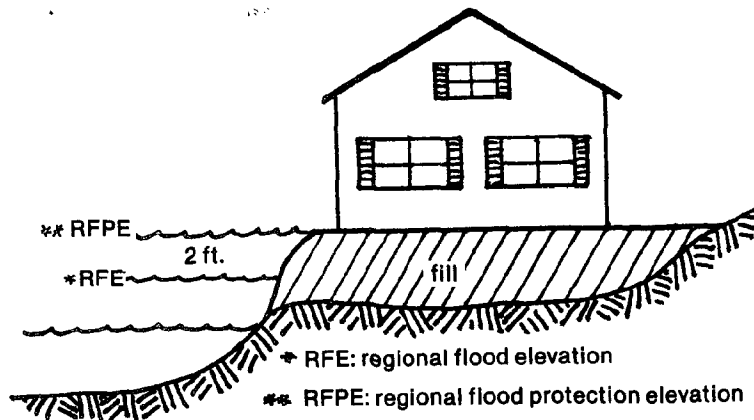


Fig. 2.2 Regional Flood Elevation vs. Regional Flood Protection Elevation

**Regional Flood Protection Elevation** - The regional flood protection elevation corresponds to a point two feet above the regional flood elevation.

**Floodproofing** - Floodproofing involves any combination of structural provisions, changes or adjustments to properties and structures subject to flooding, primarily for the purpose of reducing or eliminating flood damages. The most common method of floodproofing a structure is to raise it on fill to a height above the regional flood elevation.

**Floodplain** - Floodplains are lowlands adjoining lakes and rivers which will be covered by water during the regional flood. For management purposes, the

floodplain is divided into two districts, called the floodway and the flood fringe.

**Floodway** - The floodway consists of the stream channel and the adjacent portion of the floodplain required to carry off excess waters from the regional flood. Anything in the floodway not of sound construction could be swept away. Anything that will impede the flow will also cause higher flood levels and more damage upstream. It is, therefore, important to keep the floodway as open and free of obstruction as possible.

**Flood Fringe** - The flood fringe is the portion of the floodplain outside of the floodway. Flood waters in this area cover the ground, but they may not flow with any appreciable force. Construction may be allowed in the flood fringe, providing it does not increase flood levels by more than 0.1 foot and it is elevated above the regional flood protection elevation or floodproofed.

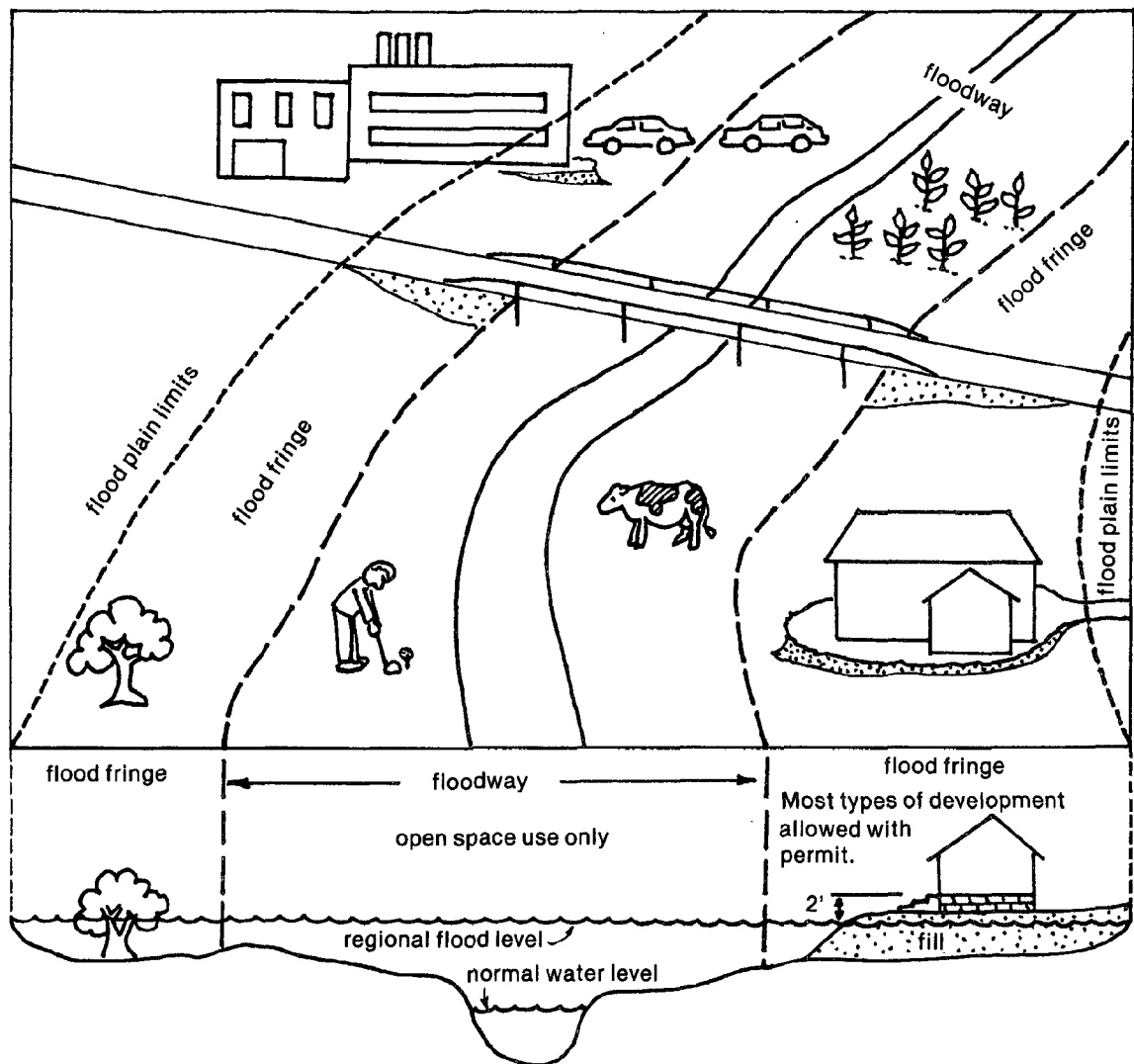


Fig. 2.3 The Floodway and the Flood Fringe



**Flood Profile** - A flood profile is a graph showing the relationship of the water surface elevation of a flood to locations along a river or stream. For information on how to read a flood profile, see Chapter 6, "Special Helps."

**Freeboard** - Freeboard is a safety factor usually expressed in feet, above a certain flood level. Freeboard compensates for the many unknown factors (waves, ice, debris, etc.) that may increase flood heights beyond the calculated level. Chapter NR 116 requires three feet of freeboard for levees built in the floodplain.

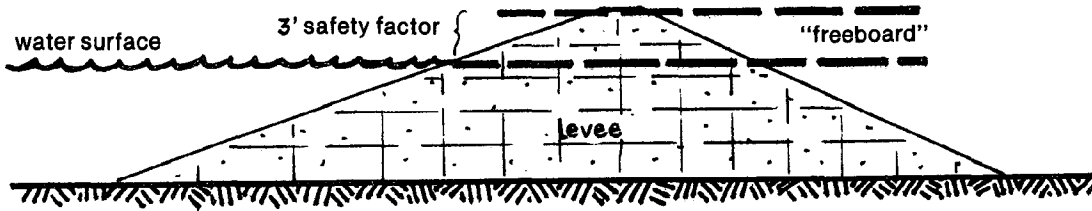


Fig. 2.4 Freeboard

**Hydraulic Reach** - This is an engineering term used to describe portions of a stream which lie between one major change in the stream character and the next major change. For example, the portion of a stream between two bridges constitutes an hydraulic reach.

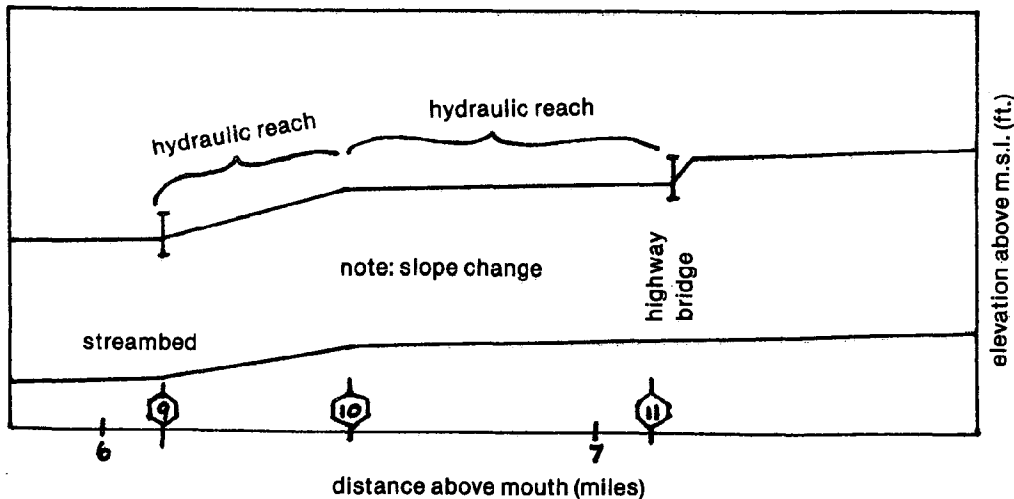
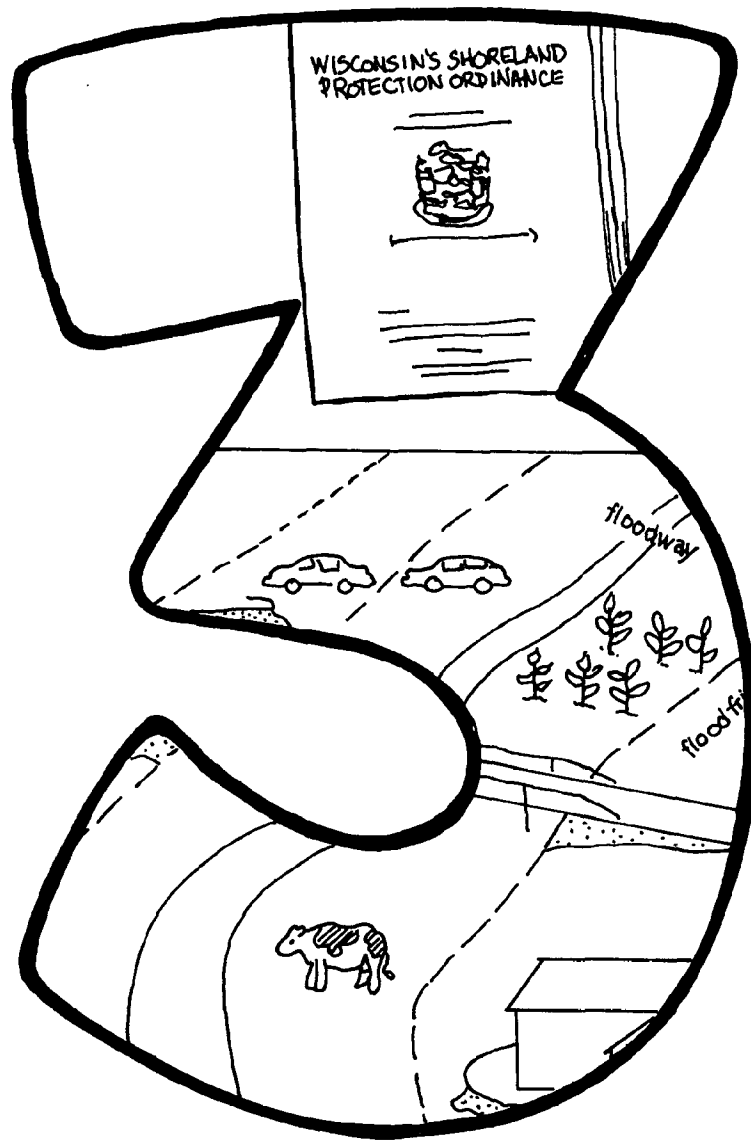


Fig. 2.5 Hydraulic Reach

**Ordinary High Water Mark (OHWM)** - This is the point on the bank or shore of streams and lakes where the presence or action of surface water is continuous enough to leave a distinctive mark. The line may be indicated by erosion, destruction or change in vegetation, or other easily recognizable characteristics.

**Shorelands** - In Wisconsin, shorelands around a lake, pond or flowage are those lands extending 1,000 feet from the ordinary high-water mark. Shorelands along a river or stream are those lands 300 feet from the ordinary high water mark, or to the landward edge of the floodplain, whichever distance is greater.

**Wetlands** - These are areas where water is at, near or above the land surface long enough to be capable of supporting vegetation typically adapted to saturated conditions. These areas are also identified by soils which indicate wet conditions. Wetlands generally include swamps, marshes, bogs and similar areas.



# WISCONSIN ZONING PROGRAMS

## Regulating Through Zoning

Through zoning a community can separate its land area into distinct districts. Within each district, various regulations for dimensions and uses will govern land use. Zoning enables a community to choose development that is most compatible with its resource base. Through shoreland zoning, navigable waters and their shores are protected from improper development. Floodplain zoning, on the other hand, protects people and property from a potentially hazardous environment.

Zoning usually regulates both the use of the land and dimensional and setback standards. In a zoning ordinance, a community lays out zoning districts and establishes permitted, special exception (conditional), and prohibited uses within each district. Dimensional standards specify lot sizes, setback distances, and placement of private sanitary facilities. Any development or change in land use that a landowner wishes to undertake requires approval by the local zoning administrator or a county agency. After the property owner completes the appropriate forms and supplies the necessary information, the zoning administrator may:

- 1) Issue a land use permit for allowed uses if the proper dimensional restrictions are met.
- 2) Advise the landowner to seek a variance if the dimensional standards create a hardship or practical difficulty.
- 3) Instruct the applicant to apply for a special exception (conditional use) permit for activities that are only allowed under certain conditions.
- 4) Suggest that rezoning (through an amendment) would be needed for a desired project which is not permitted due to use restrictions.

Within zoning ordinances, three sets of uses may be spelled out.

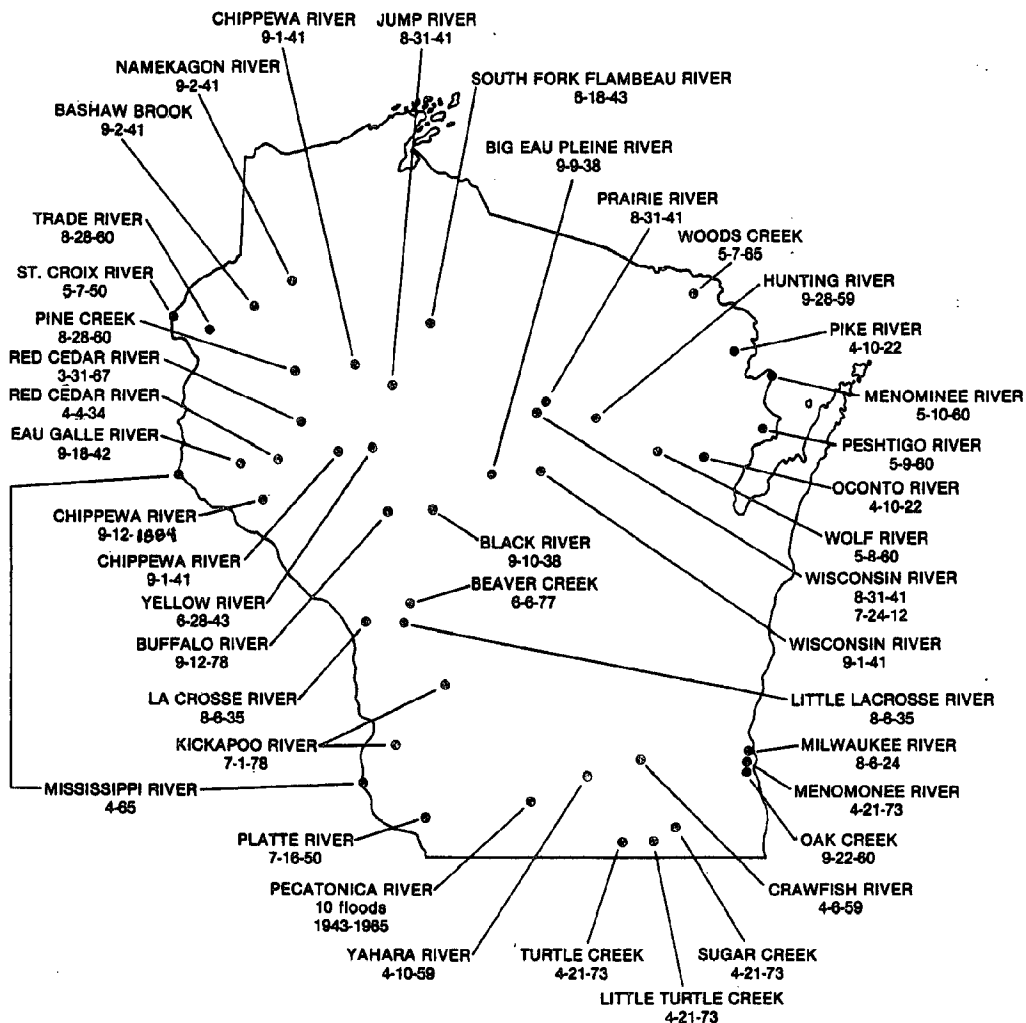
- Permitted uses are those uses which are not prohibited. A building permit or land use permit may be required if the use involves construction or modification of a structure, or any type of development. The zoning administrator examines the completed application form, visits the site and may then issue a permit for appropriate projects. Projects involving uses which fail to meet dimensional standards must be referred to the Board of Adjustment. The Board may authorize these projects by issuing a variance, but only if the proposed projects do not conflict with the intent of the zoning ordinance.
- Special exceptions (conditional uses) may be compatible with permitted uses in a zoning district, but they need to be carefully considered to ensure that they are properly sited and operated. An applicant must contact the zoning administrator to make application for a special exception permit. Counties may designate either the Board of Adjustment or the Planning and Zoning Committee to consider special exception permits. Uses not specifically identified as being permitted or special exceptions are prohibited.

- Prohibited uses may only be allowed in a given zoning district if the governing body authorizes an amendment to the zoning ordinance text or map. In rezoning an area to a different district, the once prohibited use may become a permitted use or a special exception. Map and text amendments are referred to the Planning and Zoning Committee for a public hearing. The Planning and Zoning Committee makes recommendations to the County Board which then takes official action. The application of these zoning principles in managing Wisconsin floodplain and shoreland areas is discussed in the following sections.

# Floodplain Management

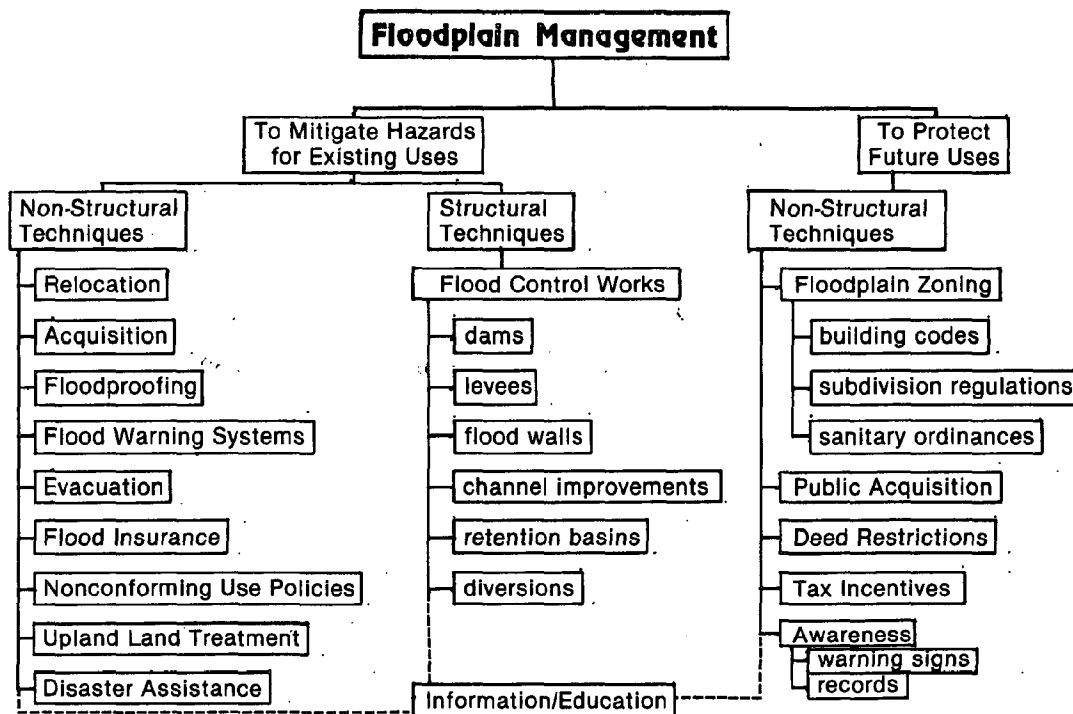
Two definitions of floodplain management commonly arise. The first deals with only particular solutions, such as land use regulation to flood problems. But in a broader sense, floodplain management includes the analysis and integration of the entire range of measures that can be used to prevent and mitigate flood damage. In other words, floodplain management deals with 1) present uses - how we can reduce flood damage to existing development and 2) future development - how it may be guided to prevent flood damages.

In the past, the usual approach to flood damage reduction - often referred to as the "structural approach" - was to construct flood prevention and retention works such as dams, levees, floodwalls, diversions, and channel improvements. These works, coupled with disaster assistance and financial recovery plans, were the primary tools employed to deal with flood losses.



Regional Floods in the State of Wisconsin

More recently we have focused upon proper use of floodplain land to lessen future flood damages. This is referred to as the "nonstructural approach." Of the measures to protect future uses of the floodplain, Wisconsin has found floodplain zoning to be the most cost-effective. Unfortunately, there has been a tendency to view the use of nonstructural measures, particularly floodplain zoning, and structural measures as presenting an "either-or" choice. But floodplain management should emphasize selecting the combination of these measures most appropriate to deal with flooding in a particular area. To accommodate local situations and a community's own objectives, Wisconsin has set minimum floodplain management standards that a community may adapt to meet its individual needs.



For effective floodplain management, a community fits together the most appropriate combination of measures to deal with their particular flood situation and community objectives.

## Floodplain Zoning: A Non-Structural Management Tool

Wisconsin's 1965 Water Resources Act authorized the floodplain management program. Wisconsin's floodplain program has won nationwide acclaim as a pioneering effort to alleviate flood damage using non-structural controls.

Zoning has proven to be one of the most effective tools for carrying out land use plans. Zoning is not a new concept. Government has always regulated the use of property to some extent. New York City adopted the first comprehensive zoning ordinance in 1916. While our American principles recognize a citizen's inherent right to acquire and hold real estate, that right does not necessarily carry with it the privilege for a landowner to use land in any manner he or she may choose. The rights of adjoining landowners and the general public must enter the picture.

The United States Supreme Court recognizes the legitimacy of zoning. When such zoning seeks to prevent harm, rather than simply secure public benefits at the expense of private landowners, it is an allowable exercise of regulatory (police) powers.

The statutory authority for floodplain management is contained in Section 87.30, Wisconsin Statutes (see Appendix B). This section requires the State to adopt floodplain zoning ordinances for counties, cities and villages that fail to do so. After sufficient hydraulic and hydrologic data become available, local governments have one year in which to adopt an ordinance. If a community fails to fix floodplain limits or adopt a floodplain zoning ordinance in a reasonable time frame, the DNR is required, upon its own motion or if petitioned by another State agency or municipality, to adopt an ordinance for the community. The State may only fix floodplain limits or adopt an ordinance for a community after giving proper legal notice, holding a public hearing and notifying the appropriate standing committees of the Legislature. In such a case the cost of adopting the zoning ordinance would be levied against the community.

The DNR may also intervene when a community adopts an insufficient floodplain ordinance. In such a case, the DNR must notify the community of the ordinance's insufficiency in writing before amending a community's ordinance.

Ordinances adopted by the State have the same effect as if they were adopted by the community itself. After adoption, the community is responsible for administering and enforcing the floodplain zoning ordinance. The county may amend the ordinance text or maps only with approval of the DNR.

Administrative regulation NR 116 (included in Appendix B) sets in writing State guidelines and minimum standards for local floodplain ordinances. It should be noted that the law specifically allows communities to adopt regulations more restrictive than the State standards. The administrative rule outlines:

- the purpose of the floodplain management program
- adoption of ordinances
- determination of floodflows
- delineation of floodways
- allowable uses, nonconforming uses for floodway and flood fringe areas
- local administrative responsibilities
- procedures for variances, special exceptions and amendments
- DNR responsibilities.



The purpose of Wisconsin's floodplain program is to ensure a uniformity in local programs. Local regulations need to comply with State goals and minimum standards because the physical and economic effects of floods cross local government boundaries. The State standards seek to:

- protect life, health and property
- minimize costs for flood control projects
- reduce rescue and relief efforts
- reduce tax dollars spent for flood damages
- shorten business interruptions
- reduce damage to public facilities and utilities
- prevent future flood blight areas
- discourage victimization of unwary land and home buyers.

An ordinance must be adopted, administered and enforced for all floodplains within a community's jurisdiction. State standards for effective floodplain management are also included in other related land use codes and programs. Subdivision regulations, building and sanitary codes, and flood insurance regulations reflect the goals set forth for floodplain management.

Zoning is not the only tool for accomplishing floodplain management. Communities can acquire easements, purchase property, or develop tax incentives to ensure strictly open-space uses. The Weather Service and early flood warning systems have been effective in reducing property damages and loss of lives in some communities. These techniques may be applied in addition to zoning where appropriate.

## Floodplain Studies Determine Areas to be Regulated

The text of floodplain zoning ordinances must be accompanied by an official map delineating the floodprone areas being regulated. Local floodplain zoning maps can be any of several types. A community may have more than one type of floodplain map, but only the most detailed and up-to-date will be designated as the "official floodplain map" in the text of the ordinance. The most commonly used maps are:

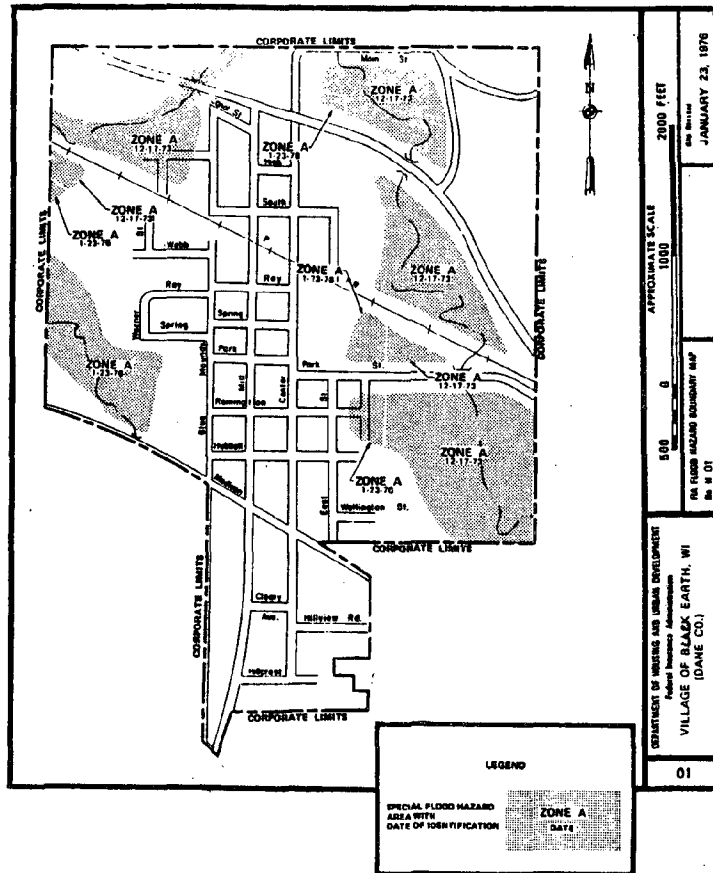
- Flood Hazard Boundary Maps
- Flood Insurance Studies including Flood Insurance Rate Maps and Flood Boundary-Floodway Maps
- Floodplain Information Reports
- Flood Hazard Studies

Other floodplain determinations are made in case-by-case studies or major project restudies done by DNR engineers.

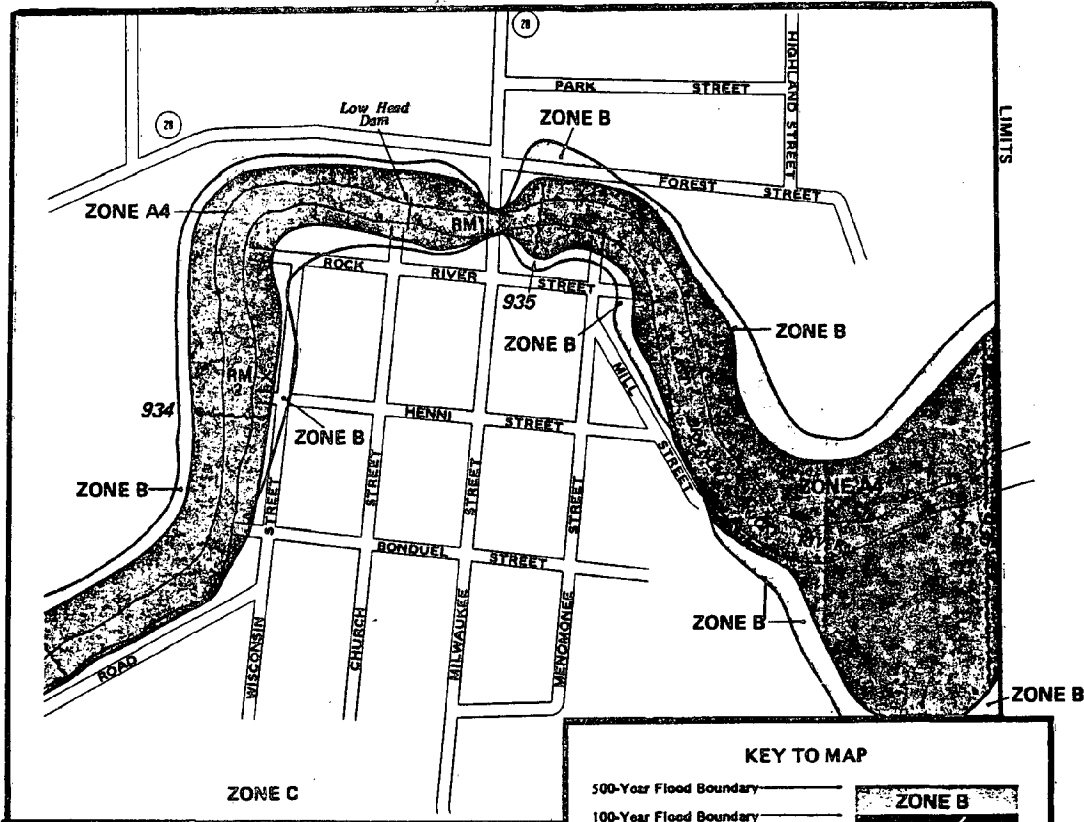
Flood Hazard Boundary Maps (FHBM) were first produced by the Department of Housing and Urban Development (HUD) and later by the Federal Emergency Management Agency (FEMA). This series of maps began in

1968 as part of the National Flood Insurance Program. The National Flood Insurance Act of 1968 required HUD to notify all floodprone communities that they had one or more flood hazard area. FHBMs are published to alert citizens of these communities to the hazard they face. The floodplain was approximated on the basis of the best available data, usually USGS topographic maps, soil surveys or historic flood information. Communities can adopt floodplain zoning on the basis of a FHBM, but these maps show only a general floodplain district, not floodway and flood fringe. The community can either regulate the whole floodplain as floodway, thereby prohibiting all but open-space uses, or require a "case-by-case analysis" for each proposed development.

## FLOOD HAZARD BOUNDARY MAP (FHBM)



# FLOOD INSURANCE RATE MAP (FIRM)



**\*EXPLANATION OF ZONE DESIGNATIONS**

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

**KEY TO MAP**

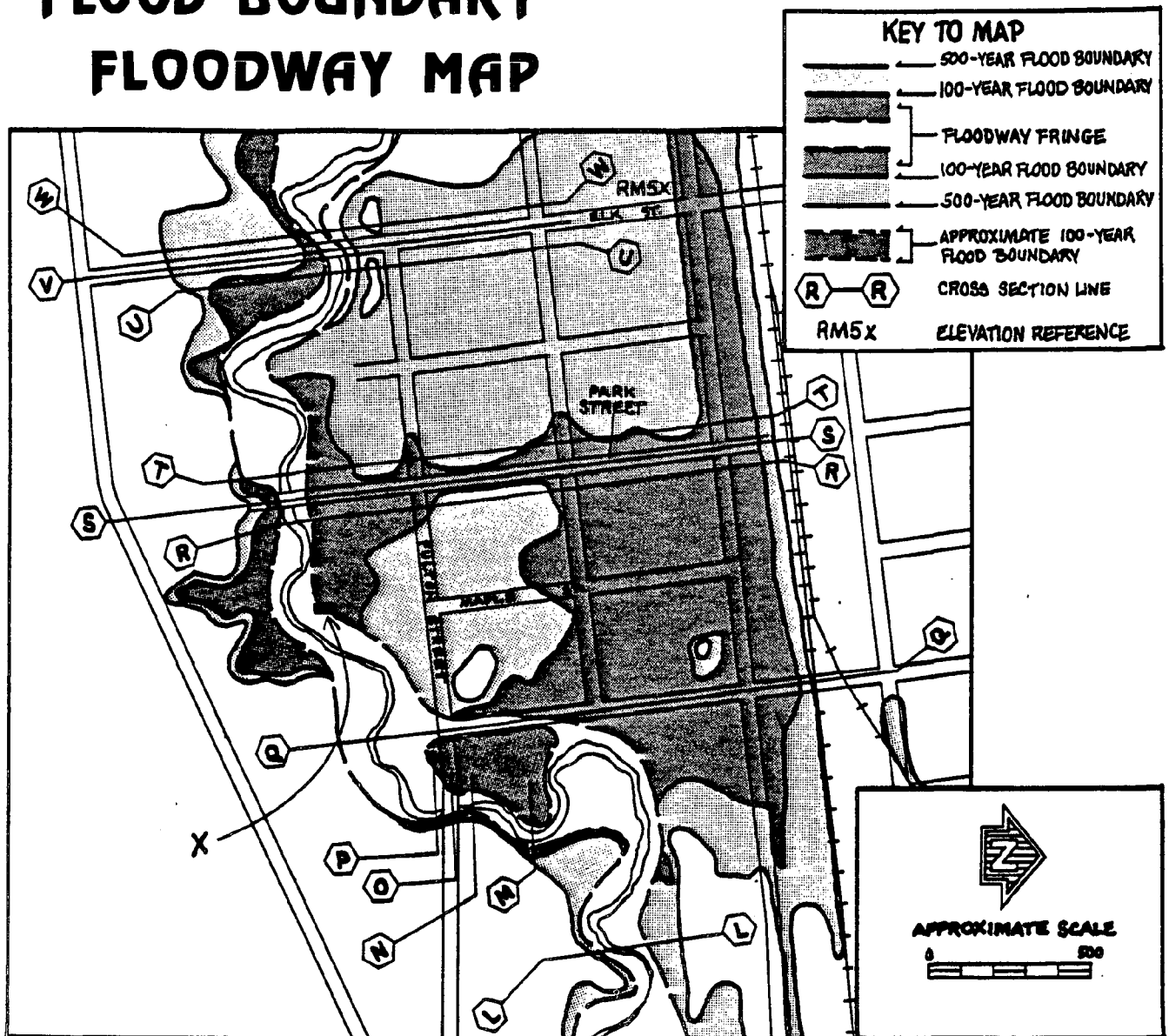
500-Year Flood Boundary	—————	
100-Year Flood Boundary	—————	
Zone Designations* With Date of Identification e.g., 12/2/74		
100-Year Flood Boundary	—————	
500-Year Flood Boundary	—————	
Base Flood Elevation Line With Elevation in Feet**	~~~~~513~~~~~	
Base Flood Elevation in Feet Where Uniform Within Zone**	(EL 997)	
Elevation Reference Mark	RM7x	
River Mile	o M1.5	

\*\*Referenced to the National Geodetic Vertical Datum of 1929

Flood Insurance Studies are funded by the Federal Emergency Management Agency (FEMA). These maps are the second step in the National Flood Insurance Program mapping efforts. The detailed engineering work is contracted to either the U.S. Army Corps of Engineers, U.S. Geological Survey, U.S. Soil Conservation Service, a regional planning commission, or private consultants. Two types of maps are produced as a result of these studies:

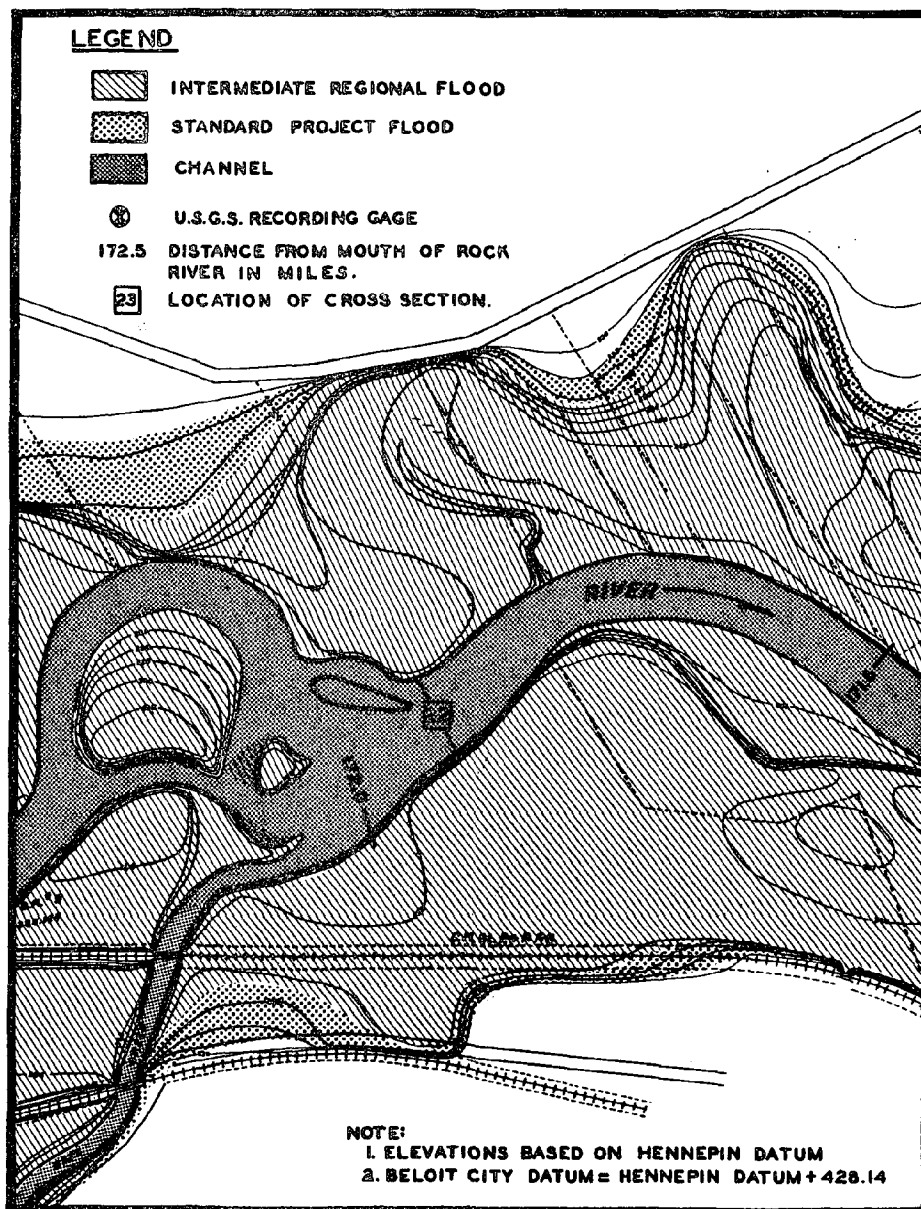
- Flood Insurance Rate Maps (FIRM) establish insurance rate zones,
- Flood Boundary-Floodway Maps (FBFWM) separate floodway from flood fringe areas.

# FLOOD BOUNDARY FLOODWAY MAP



Floodplain Information Reports were previously done by the U.S. Army Corps of Engineers, but have been discontinued because of their overlap with FEMA's Flood Insurance Studies. Two types of maps were generally produced. The regional flood was delineated on aerial orthophotographs with contour intervals of 2' or less. The intermediate regional flood (1% chance flood) and standard project flood (500 years or greater) were outlined on a base map showing streets, railroads and other features.

# FLOOD PLAIN INFORMATION REPORT



Flood Hazard Studies are the result of a recent cooperative DNR-U.S. Soil Conservation Service program (SCS). The SCS will perform flood hazard studies and develop flood hazard mitigation alternatives at the request of local governments.

In the study the SCS will:

- Carry out topographic and field surveys
- Perform hydrologic and hydraulic investigations
- Prepare reports and maps to meet State, local, and Federal regulations
- Assess natural values of the floodplain

Drainage areas must usually be smaller than 250,000 acres (40 square miles) to receive SCS attention, and areas where Flood Insurance Studies have been completed or are scheduled for completion within two years are ineligible for an SCS hazard study. Additional SCS technical services--help with interpreting the study findings, revising floodplain regulation standards and criteria, determining the regulatory floodway, and developing floodproofing techniques - can follow the SCS study or a detailed study done by another agency. The SCS requires local governments to contribute 20% of the study costs. In-kind services by the community or DNR are accepted as the community's contribution to the study.

## Uses of the Floodplain — Permitted and Nonconforming

### Permitted Uses

The administrative rules for floodplain management have set forth minimum standards a community must follow in its ordinance. A community may adopt more restrictive standards but not less restrictive. Where detailed engineering studies have delineated floodway and flood fringe, the zoning ordinance will usually provide separate allowable uses for the floodway and flood fringe. In communities whose maps detail only the general floodplain district or where no engineering study has been done, the whole area may either be regulated as floodway or analyzed on a case-by-case basis for each proposed development. For all subdivisions or when other proposed development is greater than 5 acres, 50 lots or exceeds \$75,000 in estimated costs, the applicant bears the cost of these determinations. For smaller projects the information and written request for technical assistance may be transmitted by the zoning administrator to the DNR District or Area Office. DNR engineering staff will determine floodway boundaries and regional flood elevation.

## Allowed, Permitted & Prohibited Uses of the Floodway

Allowed or Permitted	Permitted Under Special Conditions	Prohibited
<u>Agriculture</u>		
-cropland -pasture -orchards -forestry		-farmhouses -farm implement storage -barns, silos, sheds -farm implement sales
<u>Recreation</u>		
-natural areas	-parks, trails, playgrounds -tennis courts, golfcourses -swimming pools -piers, marinas -overnight campgrounds -shelterhouses, picnic tables	-wells for drinking water -on-site sewage disposal systems (see H62.20)
<u>Residential</u>		
-yards, gardens, patios		-new residential bldgs. -mobile homes -garages, storage sheds -porches
<u>Commercial, Industrial</u>		
	-parking lots, loading areas -airport landing strips -sand and gravel ops.	-commercial structures -industrial buildings
<u>Utilities, Public Facilities</u>		
	-railroads, streets -bridges, dams -utility lines, pipelines	-solid waste disposal sites -sewage treatment plants

## Allowed, Permitted & Prohibited Uses of the Flood Fringe

Allowed or Permitted	Permitted Under Special Conditions	Prohibited
<u>Agriculture</u>		
-cropland, pastures -orchards, forests	-farmhouses -barn silos, sheds -implement storage -implement sales	
<u>Recreation</u>		
-natural areas -parks, trails, playgrounds -golfcourses, tennis courts	-piers, marinas -swimming pools -shelterhouses, picnic tables	
<u>Residential</u>		
-yards, gardens, patios -new porches	-garages, storage sheds -residential bldgs. -mobile homes -on-site sewage disposal systems, wells	
<u>Commercial, Industrial</u>		
-parking lots, loading areas -sand & gravel ops. -airport landing strips	-commercial structures -stables, kennels	
<u>Utilities, Public Facilities</u>		
	-railroads -bridges, dams -utility lines, pipelines	-solid waste disposal sites



The State standards define different permissible uses for the floodway and flood fringe areas. In the floodway, the zone of rapid flood flow, open space use is required. Permitted uses include agriculture, recreation, parking and certain sand and gravel operations as long as these activities can occur without obstructing flood flows. Buildings for human habitation are prohibited in floodways, as are on-site sewage disposal systems wells for human drinking supply, and solid waste disposal sites. The storage of buoyant, flammable or explosive material or those that obstruct flood flows is prohibited in floodways. Campgrounds which meet specific criteria may be allowed in a floodway. Dams, bridges and other shoreworks requiring Chapter 30 or 31 Wisconsin Statutes permits, public utilities and streets, are allowed in floodways if they are adequately flood-proofed and don't cause a significant increase (greater than 0.1 foot) in the height of the regional flood. If a particular use increases the regional flood elevation by more than 0.1 foot, easements must be obtained from affected property owners. The local ordinance must be amended to officially change the floodplain boundary.

Uses in the flood fringe areas are more permissive than in the floodway because the flood fringe is associated with standing or slowly moving water rather than rapidly flowing water. The uses permitted in the flood fringe will not increase flood heights and adversely affect other property owners. Communities may allow certain residential, industrial or commercial uses in the flood fringe area if those uses:

- 1) are compatible with local comprehensive plans;
- 2) do not cause a significant (greater than 0.1 foot) increase in the height of the regional flood; and
- 3) do not materially decrease the storage capacity of the floodplain.

The first floor of flood fringe residences must be elevated to the flood protection elevation (two feet above the regional flood). When buildings in the flood fringe are placed on fill, the fill must be at least one foot above the elevation of the regional flood. The fill must extend 15 feet beyond the building and be contiguous to land outside the floodplain so the structure can be reached by rescue and relief vehicles. In communities eligible for the National Flood Insurance Program, FEMA regulations prohibit basements in the floodplain. Houses with basements are assessed flood insurance rates based on the elevation of the basement floor. Industrial development must be elevated or floodproofed. Wells and on-site sewage disposal systems are allowed if floodproofed, but solid waste disposal sites, both public and private are prohibited.

#### Nonconforming Uses

As do other zoning ordinances, the floodplain regulations provide a "grandfather" clause: pre-existing lawful uses or structures in the floodplain may continue even though they do not comply with new uses permitted in the floodplain ordinance. Wisconsin differentiates nonconforming uses from nonconforming structures. Nonconforming uses, such as a house in the floodway can never be rebuilt. Nonconforming uses that are discontinued for more than twelve consecutive months lose their status, and any new use of the structure or property must then conform to the local ordinance.

Nonconforming structures (such as unelevated buildings in the flood fringe) can be rebuilt if they are floodproofed. Communities are responsible for regulating structural repairs through their building permit or land use permit programs. Ordinary maintenance such as painting, decorating, or paneling are not considered structural repairs, and are usually allowed without a permit. But when rebuilding, additions or modifications exceed over the life of the structure 50% of the present equalized assessed value, the entire structure must be floodproofed.

## Community Administration

To administer floodplain zoning, communities must appoint a zoning administrator, planning agency, and Board of Adjustment/Appeals. Many communities may already have these officials appointed for comprehensive zoning duties. In this case these officials will also administer the floodplain zoning ordinance. The specific duties of these officers is explained in Chapter 4 of this manual.

Anyone wishing to add a new use or alter the present use of land, water or a building or other structure in the floodplain must apply to the county, city or village for a permit, special exception, variance, or amendment. The local floodplain zoning ordinance must establish procedures for handling permits, amendments and appeals. NR 116 stipulates that public hearings must be held, proper notice given, and the DNR notified of all special exceptions, variances, appeals and amendments. Communities must have provisions for enforcing their floodplain regulations. Fines may be imposed for floodplain violations, but preferably, violations will be removed, abated or enjoined to preserve the spirit of the ordinance and to protect life, health and property.

## DNR Administrative Procedures

The DNR has responsibilities in four areas of floodplain management. The DNR: 1) provides assistance to local governments, 2) reviews and approves local floodplain zoning ordinance; 3) monitors local programs; and 4) enforces those programs to ensure a consistent statewide approach to floodplain management. The DNR also coordinates community efforts with other State and Federal programs, especially the National Flood Insurance Program.

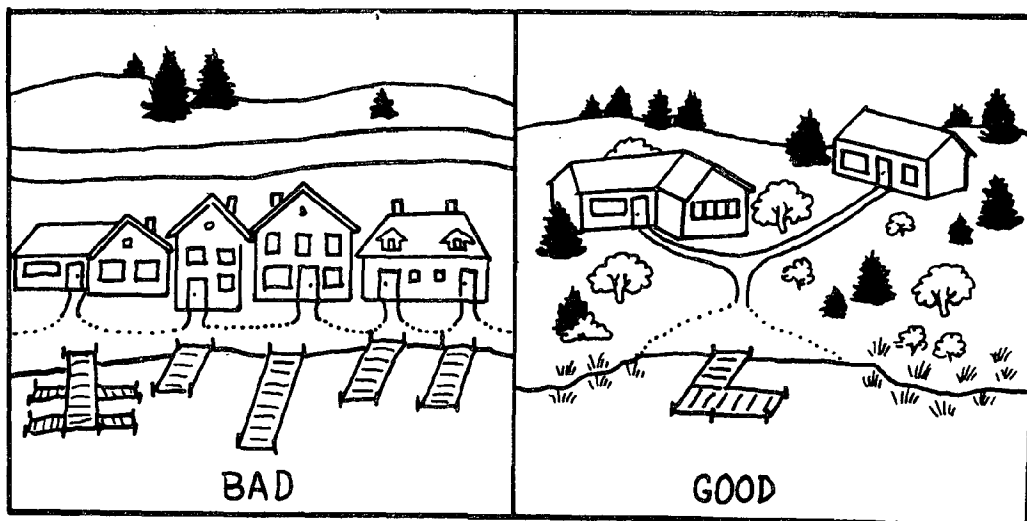
DNR floodplain management responsibilities are shared between the Central (Madison), Area and District offices. The first line of assistance for local officials should be with the Water Management Specialist at the District or Area office. Refer to the map included in "Where to go for Help" in Chapter 6 to identify which office serves your community.

# Shoreland-Wetland Management

## In the Beginning: Shoreland Management Program — NR 115

In 1966, the Wisconsin Legislature passed the Water Resources Act, Chapter 614, Laws of 1965. This legislation created a new comprehensive State and local program for managing the water resources of this state.

A portion of this act created Section 59.971 (see Appendix C) of the Wisconsin Statutes which requires the zoning of shorelands in the unincorporated areas of each county. (Shoreland zoning in the incorporated areas of counties is optional.) Shorelands, as defined by the law, are lands within 1,000 feet of a navigable lake, pond or flowage and lands within 300 feet of a river or navigable stream or to the landward edge of the floodplain, if that distance is greater. Administered by the Department of Natural Resources (DNR), the shoreland zoning program is aimed at controlling water pollution, protecting fish habitat, and regulating structures and land uses within shoreland areas.



To comply with the Water Resources Act, it was necessary for counties to enact shoreland regulations including zoning provisions, land division controls, sanitary regulations, and administrative provisions ensuring enforcement of the regulations. In the discharge of its responsibility under ss. 59.971 and 144.26, Wisconsin Statutes, the DNR requires adherence to certain specific standards and criteria. The standards and criteria were adopted as administrative rules by the DNR and are contained in Chapter NR 115, Wisconsin Administrative Code (see Appendix C). The rules also define the objectives of the regulations.

The DNR has prepared a model shoreland protection ordinance which counties may use to meet the requirements of Chapter NR 115. The original NR 115 and the first model ordinance outlined three main "use" districts that have been used by counties to protect shoreland areas. They were conservancy, recreational-residential, and general purpose districts. NR 115 was amended in 1980 and the suggested districts were changed to:

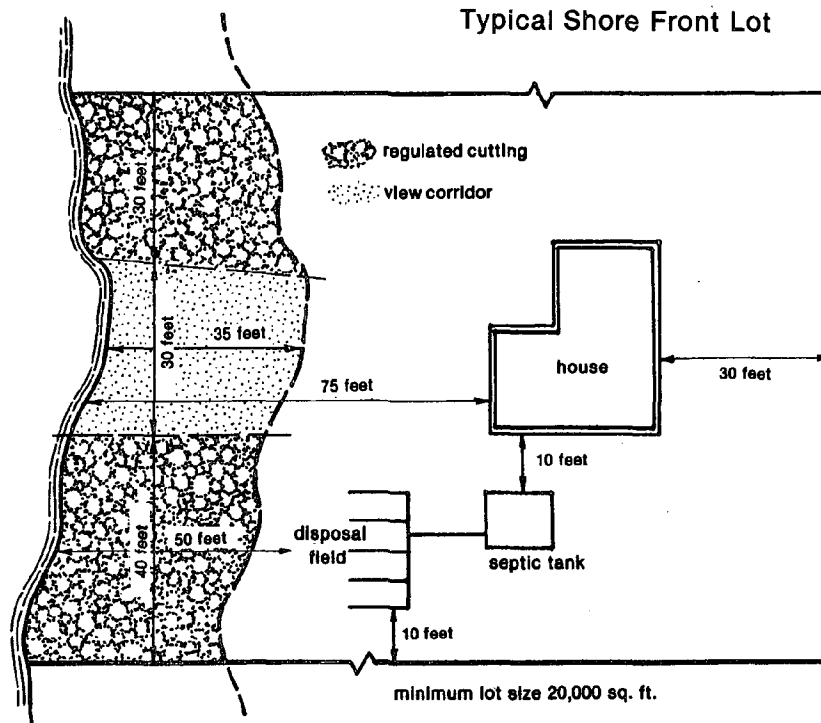
1. Shoreland-wetland zoning and conservancy or wetland districts;
2. Agricultural districts;
3. Recreational-residential districts;
4. Industrial and commercial districts; and
5. General purpose districts.



Using the original NR 115 guidelines, all Wisconsin counties have adopted and enforce minimum zoning standards for the protection of shorelands. The following major standards are now enacted in every county as required by NR 115:

- 1) A shoreland zoning ordinance to control the future uses of land. Counties are required to establish appropriate land use districts in shorelands to separate incompatible land uses and guide development into suitable areas. Counties are also required to include the following minimum standards in the ordinance:
  - a) A minimum lot size with a minimum average width of 65 feet and minimum area of 10,000 square feet for lots served by a public sewer. For lots not served by a public sewer, the minimums are a 100-foot average width and 20,000 square foot area.

- b) A minimum building setback of 75 feet from the ordinary high-water mark of the body of water.
- c) Regulations on cutting trees and shrubbery within a 35-foot wide strip parallel to the water.
- d) Control of filling, grading, dredging, ditching, and creating lagoons.



- 2) Subdivision regulations to control the future division of land. NR 115 requires that counties review all land divisions in shoreland areas which create three or more parcels of five acres each or less within a five-year period. The review consists of evaluating the property in terms of depth to bedrock, depth to groundwater, and slope of the land. In essence, the review assures that the parcel is suitable for the installation and proper functioning of an on-site private sewage disposal system.
- 3) A sanitary code based on the requirements of the Department of Industry, Labor and Human Relations (DILHR), to provide for the sanitary disposal of wastes and to help assure a clean, safe water supply. Due to the importance and complexity of sanitary regulations, other administrative codes have been developed to provide detailed guidance. They include; Chapter NR 112, Wisconsin Administrative Code, regulating construction of

private wells, s. H63, Wisconsin Administrative Code, and s. 59.065, Wisconsin Statutes, regulating design and construction of private sewage disposal systems.

- 4) An organization for administration and enforcement of the shoreland program, and to amend the regulations to keep them up-to-date. NR 115 requires a three point administrative organization consisting of the following:
- a) An administrator (the zoning administrator) to advise persons of the permitted uses of their properties, issue permits, make inspections, and report violations;
  - b) A county planning agency (the County Planning and Zoning Committee) to oversee the administration of the ordinances and to conduct hearings and make reports on proposed ordinance amendments;
  - c) A quasi-judicial body (the Board of Adjustment) to interpret the ordinance and to hear appeals for variances and special exceptions and grant or deny them as appropriate. (Hearings on special exceptions may be handled by the Planning and Zoning Committee in some counties.)

Each of these is discussed in detail in Chapter 4 of this manual.

## The New NR 115: Shoreland-Wetland Management

In 1980, under its general statutory authority to manage shorelands, the DNR repealed and recreated NR 115, changing the rules to provide additional protection for wetlands located within shoreland areas. These new shoreland-wetland standards will begin to be implemented by Wisconsin counties in late 1981, and should be phased into existing shoreland management programs throughout the State by 1984.

Early in 1981, the DNR began to distribute Wetland Inventory maps prepared under s. 23.32, Wisconsin Statutes, to counties. The maps are to be used to identify shoreland-wetland areas. Before shoreland-wetland regulations are adopted in any county, the county must review the maps prepared by DNR. These maps provide an inventory of wetlands larger than five acres. After the accuracy of maps is verified, the county is required to adopt regulations for shoreland-wetlands. Wetland Inventory maps for the entire State should be completed by 1983.

The shoreland-wetland protection standards in NR 115 assume wetlands should be preserved in their natural state as much as possible, but current wetland uses that do not involve new draining, filling, or flooding may be continued. Provision is made for re-zoning a wetland if the landowner can demonstrate that no significant adverse environmental impact will result.

NR 115, as amended, spells out the specific activities that are allowed in shoreland-wetlands; all other uses are prohibited. The list of allowed uses includes the following:

- Hunting, fishing, trapping, hiking, swimming, and boating;
- Harvesting wild crops such as marsh hay, wild rice, and berries;
- Planting, thinning, and harvesting timber;
- Pasturing livestock and constructing and maintaining fences;
- Constructing and maintaining duck blinds, piers, docks, and walkways;
- Continuing current agricultural cropping practices;
- Maintaining town and county highways and bridges.

Farmers may continue to pasture livestock or cultivate crops on shoreland-wetlands in years that are dry enough, but they cannot drain, dredge, fill, or flood any shoreland-wetlands that have not already been developed by these methods. Maintenance of existing agricultural drainage systems is allowed in those shoreland-wetlands where the landowner can demonstrate that a system is functioning, however inefficiently. These restrictions frequently are misunderstood to mean that all current uses, particularly agricultural ones, must be discontinued so that the shoreland-wetlands are forever inviolate.

Although the shoreland-wetland rules take a restrictive approach, it also contains a provision for counties to re-zone any particular shoreland-wetland upon petition by the landowner. The re-zoning must meet with DNR approval, or the Department can override it. Criteria are outlined in NR 115 to aid DNR and the county in determining whether to approve a re-zoning application. These criteria assume that protection of the wetland is the highest priority. Essentially, the activity proposed under the re-zoning should have no significant adverse impact on the following:

- Storm and flood water storage capacity;
- Maintenance of dry season stream flow, or the discharge, recharge, or flow of groundwater through a wetland;
- Filtering or storage of sediments and nutrients;
- Shoreline protection against soil erosion;
- Fish spawning or feeding grounds;
- Wildlife habitat; or
- Areas of special recreational, scenic or scientific interest.

## Role of the DNR

Section 59.971, Wisconsin Statutes, directs counties to adopt shoreland ordinances that meet the standards set by the DNR. If a county fails to do this, the DNR is authorized to adopt such an ordinance for the county, and the county is still responsible for its enforcement. The same authorizations apply to shoreland-wetland regulations. In the history of shoreland zoning, no county has failed to adopt an adequate ordinance. This record of cooperation between the DNR and local officials is a valuable precedent for shoreland-wetland regulation. Although the DNR is prepared to exercise its authority to adopt an ordinance for a county, it would prefer not to.

The DNR is also authorized to decide whether the county's ordinance meets NR 115 standards and to determine where a proposed re-zoning of a shoreland-wetland will have a significant adverse impact. If DNR determines that shoreland-wetland standards will not be met, the Department may take action under NR 115 to revise the ordinance adopted by the county or deny the re-zoning petition granted by the county.

# The Zoning Administrator

## General Information

### Who is the Zoning Administrator?

The zoning administrator is the county employee responsible for administering the zoning ordinance as it is written. Approval for certain activities not explicitly allowed by the ordinance must come from the Board of Adjustment and/or Planning and Zoning Committee - not the zoning administrator.

### General Responsibilities

General duties of a zoning administrator include:

- Advising applicants of ordinance provisions and assisting them with permit forms.
- Issuing permits where allowed by the ordinance.
- Assisting appellants with appeal forms.
- Transmitting appeal forms and case records to Board of Adjustment.
- Inspecting properties for compliance with zoning ordinance.
- Reporting violations to Planning and Zoning Committee and county legal officer.
- Issuing notices for hearings, appeals, etc. when not handled by the Board of Adjustment.
- Keeping complete records of permits issued, inspections made and other official actions.

## Duties of the Zoning Administrator

### PERMITS

#### Permit Applications

Anyone wishing to develop in a floodplain or shoreland area must obtain a permit application form from the local zoning administrator, fill it out, and submit it for approval before beginning any development activities. (See Appendix A for a sample permit application form.) An important function of the zoning administrator is to assist landowners (or agents) with their permit applications so that all forms are as complete and accurate as possible. This helps to avoid processing delays while saving the applicant, and taxpayers, time and money.



If the proposed project is in a floodplain, the permit applicant may also need to submit adequate data for the zoning administrator to use in determining the effect of the project on future flood levels. This data is explained in detail in Chapter 6, Special Helps.

If the project is near a lake or stream, the ordinary high-water mark (OHWM) must be determined. The OHWM is the point from which the setback distance is measured and sets forth the jurisdictional limits of the shoreland zone. DNR Area or District office staff are available to help zoning officials locate the OHWM.

### Review Permit Applications

Reviewing a permit application is one of the most important responsibilities of the zoning administrator. Many zoning administrators use a permit review checklist to help them determine if the proposed project meets the criteria of the ordinance. The checklist should include factors such as:



1. Is the project in a floodplain area?

The zoning administrator must first determine if the proposed project is in a special flood hazard area or a shoreland area. If this is not obvious when using a map, an on-site inspection may be necessary. As a result of an on-site inspection, the zoning administrator may find the zoning map is inaccurate. If this is the case, and the proposed project is in a floodplain area according to the map, the zoning administrator should file a map amendment request to the Planning Commission to officially correct the mapping error. Until the amendment is approved by the Commission, the zoning administrator must continue to use the existing map.



2. Is the application complete?

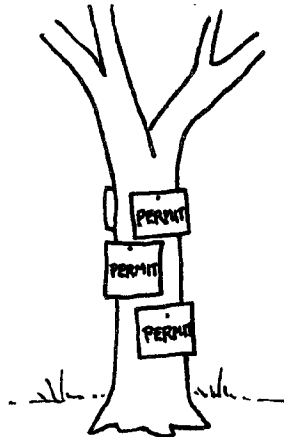
The zoning administrator cannot properly review an application if it is not complete. The application must include a thorough description of the proposed development, and provide enough data to determine if the project will comply with all ordinance provisions. If the application is incomplete or additional data is needed, the zoning administrator can ask the applicant for more information.



3. Have all other applicable permits been obtained?

Quite often, more than one permit is required to complete a certain project. It is the applicant's responsibility to ensure that all applicable local, State and Federal permits for the

proposed project are acquired. The zoning administrator should issue the land use permit only after the additional required permits are obtained.



4. If the project is in a floodplain, will it be safe from flooding? Will it raise future flood levels?

To review an application for a proposed project in a floodplain, the zoning administrator must analyze whether the project will be protected from floods and whether it will affect future flood levels. The first necessary piece of information is the elevation of the regional flood. If the community has a Flood Insurance Rate Map (FIRM) and a Flood Insurance Study (FIS), flood data for the development site is readily available. If no detailed technical data has been supplied to the community, the zoning administrator must determine the elevation from the best informational available. The applicant is responsible for supplying the data necessary to conduct an analysis. (See "Field Data Needed for Floodplain Determination" in Chapter 6.) Many other agencies and reports are available to help the applicant or zoning administrator develop this data.

(For a list of these agencies, See "Where to Go For Help" in Chapter 6.)

The zoning administrator must ensure there is an analysis of the affect of the proposed development on future flood heights. This is analyzed using an equal degree of hydraulic encroachment on the opposite side of the stream or river. The reason for this is to assure that property owners up, down, or

across the stream or river will have the same rights to encroach on the flood-plain. If the analysis shows that the development will raise the regional flood level by more than 0.1 foot, the permit must not be issued. (Some ordinances may be more restrictive than 0.1 foot.)

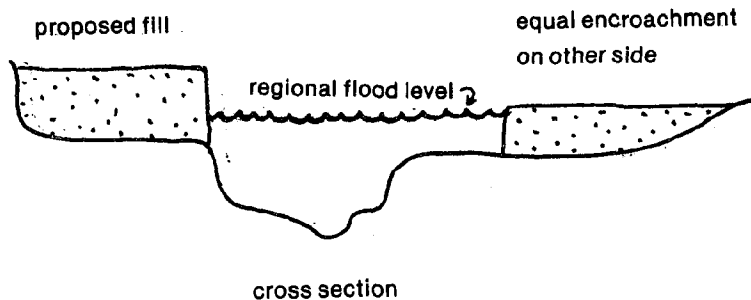


Fig. 4.1 Equal Degree of Hydraulic Encroachment

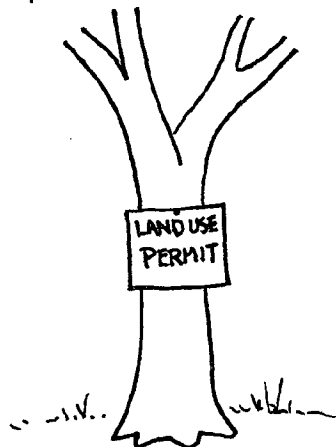
If the project will not raise flood levels, the zoning administrator may then review the development in relation to the flood hazard, and determine if it will be safe from flooding. If the first floor elevation of the project is below the regional flood elevation, then it will be subject to damage during a flood. A permit must not be issued unless the project is raised on fill to protect it from floods, and it must not increase the flood hazard to other areas.

#### Acting on the Permit Application

Following a complete review of the permit application, the zoning administrator may:

1. Approve the permit.
2. Approve the permit on the condition certain modifications are made to comply with the ordinance.
3. Deny the permit.

If the zoning administrator approves an application for a permitted use in the floodplain or shoreland, a land use permit must be issued to the property owner. This permit must be posted on the property in an obvious position, to notify enforcement officials and the public that the work has been cleared through the proper channels.



## Appeal Rights

When the zoning administrator denies a permit, the property owner has the right to appeal the decision to the Board of Adjustment. Likewise, if a permit is granted and neighboring property owners or other "aggrieved" persons wish to object, they also have the right to appeal to the Board of Adjustment.

The Board is authorized by law to grant a variance from the dimensional standards of the local ordinance in specific cases, for specific reasons. (Any use changes could only be accomplished by amending the ordinance. Amendments are discussed later in this manual.) The zoning administrator should advise the applicant of the right to appeal, and assist him or her in filling out the appeal form. An example of an appeal form is included in Appendix A. Many ordinances place a time limit on the appeal process (usually 30 days), so the zoning administrator should advise the applicant to promptly exercise that right.

### Zoning Administrator's Responsibility in Appeals to the Board

If an applicant decides to appeal a denied permit, the zoning administrator assists the applicant in filling out the appeal form, and files it with the Board of Adjustment.

Hearings before the Board are similar to a court trial, with sworn witnesses and decisions based on the evidence and specific standards, although the parties are not required to be represented by attorneys. (For details on the hearing process, see the following section on the Board of Adjustment.) Because of the quasi-judicial nature of the appeal procedure, the zoning administrator must be sure that the appeal application is complete. The zoning administrator must provide the entire file concerning the case, including the following information:

1. Application number
2. Location of premises
3. Type of structure or use
4. Zoning administrator's reasons for denial
5. Section of ordinance
6. Zoning district involved
7. Action requested by application (variance, special exception, interpretation)
8. Reasons why the request should be granted (from application)

State law requires that a class 2 notice under Chapter 985, Wisconsin Statutes, be given of the time, date and place of each hearing.

The Board of Adjustment may delegate the notification responsibilities to the zoning administrator. (Details of the class 2 notice requirements are given in the "Meetings and Hearings" section of this chapter.) The Board may also request the zoning administrator to testify at the hearings.

In summary, once a permit is denied, the zoning administrator is always required to:

1. Advise applicant of the right to appeal.
2. Assist applicant with filling out the necessary forms.
3. File the information with the Board of Adjustment.

The zoning administrator is usually required to:

1. Have the hearing notice published.
2. Distribute the hearing notice to parties in interest.
3. Present facts at the hearing.

#### SPECIAL EXCEPTION PERMITS AND AMENDMENTS

The zoning administrator has little responsibility in the special exception permit or the amendment procedures beyond advising the applicant of the proper course of action to take, and forwarding the applications to the proper governing body. A general understanding of these processes is useful, and are described in the following sections on the Board of Adjustment and County Planning and Zoning Committee.

#### ENFORCEMENT

##### Inspections

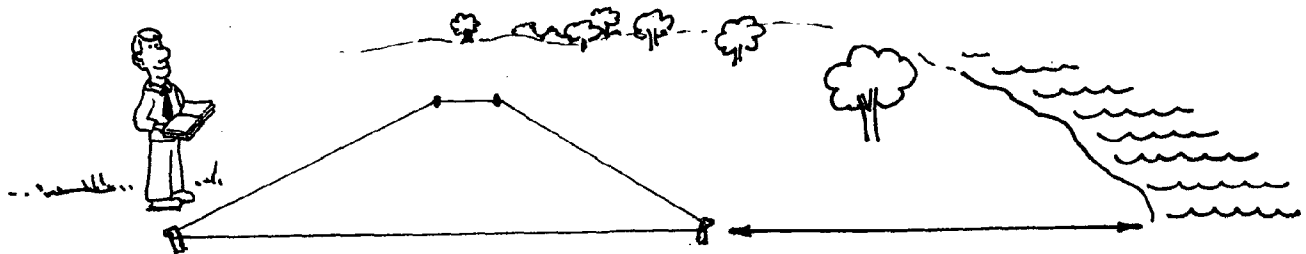
Inspections are necessary to assure proposed and ongoing projects are in compliance with the ordinance. At a minimum, project site inspections should be made at the following times:

- 1) Before issuing the land use permit.



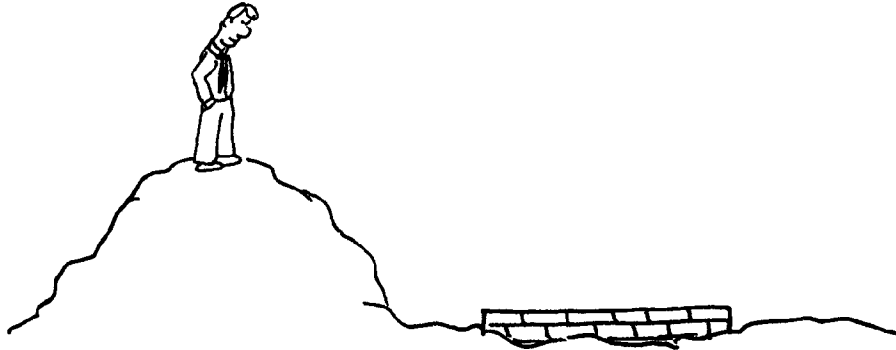
WHY? This will give the zoning administrator a better idea of what the owner proposes to do, and how it agrees with the terms of the ordinance.

- 2) When the outlines of any building and accessory structures have been staked out on the ground.



WHY? Errors in location, elevation or size can be detected and corrected before building begins.

- 3) When the foundation walls have been constructed and the sewage disposal system installed (but not yet covered over).



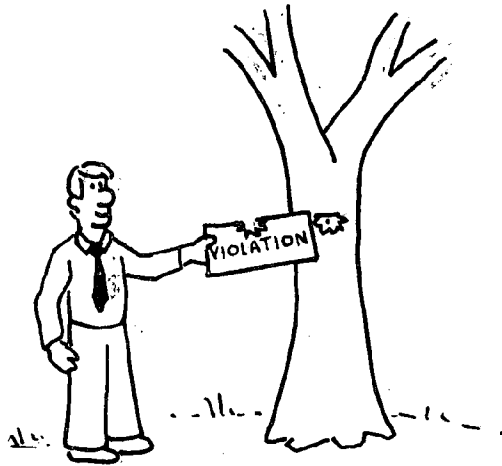
WHY? This is a recheck of the previous inspection to make sure no errors have crept in during construction. The zoning administrator should require the builder to give adequate notice when construction reaches this stage so an inspection can be scheduled.

- 4) When work covered on the project has been completed.



WHY? This inspection is the basis for the Certificate of Compliance. It should be thorough to ensure that all permit conditions have been met.

5) After correction of a violation.



WHY? This will assure the violation has been completely removed.

When all inspections assure the zoning administrator that the work meets permitted standards, a Certificate of Compliance may be issued.

#### Certificate of Compliance

New buildings or additions are not to be occupied until a Certificate of Compliance is issued to the landowner.

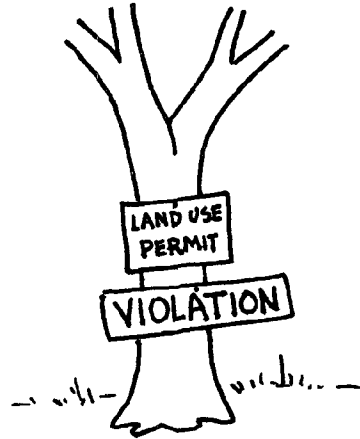
This certificate declares that the particular building or project was completed in full compliance with the county zoning ordinance and other applicable laws and regulations. An example of the certificate is included in Appendix A.

When the development project has been completed, the landowner applies for the Certificate of Compliance. Before the certificate is issued, all errors in construction or installation of equipment must be corrected. Changes in the project from the plans on file, must be processed as violations. In floodplain areas, the applicant must submit a certification by a registered professional engineer, architect, or surveyor that the finished construction conforms to the fill and first floor elevation requirements as well as appropriate floodproofing standards. An uncorrected error is a violation, and the zoning administrator must process it accordingly.

## Violations

Action on an alleged zoning violation is usually initiated by:

- 1) The zoning administrator; or
- 2) A complaining citizen



To initiate enforcement action the zoning administrator should:

- 1) Investigate.
  - inspect the site
  - take photos of the site (noting time of day, direction, etc.)
  - if there is a violation, note it on the Complaint or Notice of Violation form
- 2) Fill out the Notice of Violation form or complete the Complaint form filed by a complaining citizen (see examples of these forms in Appendix A). Be sure to:
  - describe the violation and its location
  - identify the person making the complaint
  - reference the section(s) of the ordinance violated
- 3) Distribute copies of the Complaint or Notice of Violation form to:
  - Board of Adjustment and the Planning and Zoning Committee
  - District Attorney or Corporation Counsel
  - Property owner
  - DNR Area or District office if the violation is in a floodplain or shoreland
  - Keep a copy for zoning administrator files



NOTE: Some counties have adopted a citation ordinance which authorizes the zoning administrator and other county officials to issue citations to start an enforcement action to impose a forfeiture on the alleged violator immediately, without going through the enforcement process described here. The statutory authority for adopting such an ordinance is found in s. 66.119, Wisconsin Statutes.

4) Notify the violator by either:

- a) Notifying the property owner or the owner's agent by letter, or
- b) Posting a violation notice on the premises.

The preferred method is to notify by certified mail, with a return receipt. But if a property owner is difficult to locate, posting may be necessary (see example in Appendix A).

The District Attorney or Corporation Counsel's office may take further action once they are notified of the violation. Voluntary correction of the violation is preferred to legal action (prosecution/enforcement). If the property owner agrees to correct the violation, the zoning administrator will need to inspect the property to make sure the violation has been corrected.

#### RECORD KEEPING

Record keeping is an extremely important part of the zoning administrator's responsibility in administering county zoning programs. All official actions must be completely documented in a file record so the Planning and Zoning Committee, Board of Adjustment, and perhaps the courts, can make well informed decisions. Specifically, the following records must be kept on file and open for public inspection:

- a. A complete and up-to-date copy of all zoning ordinances, maps, etc.
- b. If the county is participating in the Flood Insurance Program, it is required to record the elevations of the lowest floor (including basements) of all new or substantially improved structures in a flood hazard area. For floodproofed structures, the elevation to which they have been floodproofed must be obtained and recorded.
- c. A project file should be kept for each development permit application. The file should contain:

- The permit application
- The permit review checklist
- Copies of all pertinent correspondence relating to the project
- Any appeal or petition proceedings, including a published class 2 notice of the hearing, hearing minutes, and the written decision
- Documentation of inspections
- Subdivision data (if necessary)
- A copy of the Certificate of Compliance

A recommended procedure is to keep a daily log of permit applications. The log should list such information as:

- Date of application
- Applicant's name
- File number
- Type of permit
- Brief project description
- Cost of permit
- Payment date and receipt number

The zoning administrator should also keep logs for the Board of Adjustment and Planning and Zoning Committee listing the appeal and petition applications filed. The log should include:

- Applicant's name
- Hearing or petition number
- The township and zoning district
- A legal description
- Hearing date
- Board or Committee written decision

# The Board of Adjustment

[NOTE: Much of the material and case examples found in this chapter has been taken from Zoning Boards of Adjustment/Appeals, prepared by the Department of Governmental Affairs, the University of Wisconsin, Madison.]



## General Information

Need: Since a zoning ordinance cannot anticipate every land use question that will arise in a county, there needs to be some mechanism to give the ordinance flexibility. The Board of Adjustment's authority to grant variances serves this purpose. Chapters NR 115 and NR 116, Wisconsin Administrative Code, require counties to appoint a Board of Adjustment.

Purpose: Several types of quasi-judicial zoning decisions are decided by a committee or board rather than by the zoning administrator. These are the variance, the special exception (also known as "conditional use") permit, and the administrative appeal. The Board of Adjustment is usually the county governmental unit responsible for handling all these cases. (Under s. 59.99(1), Wisconsin Statutes, special exceptions may also be granted by the County Board or the Planning and Zoning Committee.)

The Board of Adjustment interprets the meaning of the zoning ordinance and hears appeals for variances and special exceptions (conditional uses), and grants them where appropriate. While performing this function, the Board should not make the mistake of favoring the individual at the expense of the general public. Only by closely following the procedures established by law

and interpreted by the courts can the Board successfully navigate the narrow path between avoiding unnecessary hardship and protecting the public welfare in county land use issues.

Who is the Board of Adjustment? The Board of Adjustment is a quasi-judicial body appointed by the County Board. The law specifies that the Board can consist of no less than three and no more than five members who must all live within the unincorporated areas of the county, providing that no two members reside in the same town.

How are Board members selected? The members of the Board of Adjustment are appointed by the County Board. Their terms of office are staggered so that not more than two members will be appointed in any year. (Only one successor in any year if the Board consists of three members.)

How does it work? The Board functions in a quasi-judicial capacity when conducting hearings and making decisions. Cases handled by the Board must be given procedural due process. This means that every individual has the right to procedural fairness when a government decision is being made that affects the individual's constitutionally protected interests (such as liberty or property). A court can reverse the Board's decision on procedural grounds alone if a plaintiff can show that the Board did not follow correct procedures in handling a case. Normally, however, the court will uphold a Board decision if procedures were followed correctly.

#### Duties of the Board of Adjustment

Sections 59.971 and 59.99, Wisconsin Statutes, grant the Board of Adjustment the following powers:

- a. To hear and decide appeals where there is an ALLEGED ERROR in any order, requirement, decision or determination made by an administrative official in the enforcement of s. 59.97 or 59.971, Wisconsin Statutes, or any zoning ordinance adopted pursuant to those Statutes.
- b. To hear and decide SPECIAL EXCEPTIONS to the terms of the ordinance upon which the Board is required to pass as specified in the ordinance. (Power to decide special exceptions is not limited to the Board of Adjustment. The County Planning and Zoning Committee and the County Board may also grant special exceptions. The zoning ordinance must specify which body has that responsibility.)
- c. To authorize upon appeal in specific cases such VARIANCE from the terms of the ordinance, where owing to special conditions, a literal enforcement of the provisions of the ordinance will result in unnecessary hardship. A variance must observe the spirit of the ordinance and must not be contrary to the public interest. Only the Board of Adjustment may grant variances.

A discussion of each of these duties follows.

## ALLEGED ERRORS or (Administrative Appeals)

Administrative appeal, or appeal of an alleged error, occurs when the application for a zoning permit asks the Board of Adjustment to overrule the zoning administrator who has allegedly made a mistake in interpreting a provision of the zoning ordinance. The usual circumstances are:

1. A permit is denied based on the zoning administrator's interpretation of the ordinance. The permit applicant may see a different interpretation and appeals the matter to the Board of Adjustment.
2. A permit is denied based on the zoning administrator's interpretation of district boundaries on a zoning map. For example, shoreland district boundaries are established by measurement back from the ordinary high-water marks of lakes and streams. The boundaries of wetland areas may be irregular and difficult to locate. The zoning administrator must make an initial determination of the location of these boundaries in order to make a decision on the application. If the applicant is dissatisfied with the zoning administrator's determination, he or she may appeal it to the Board of Adjustment.

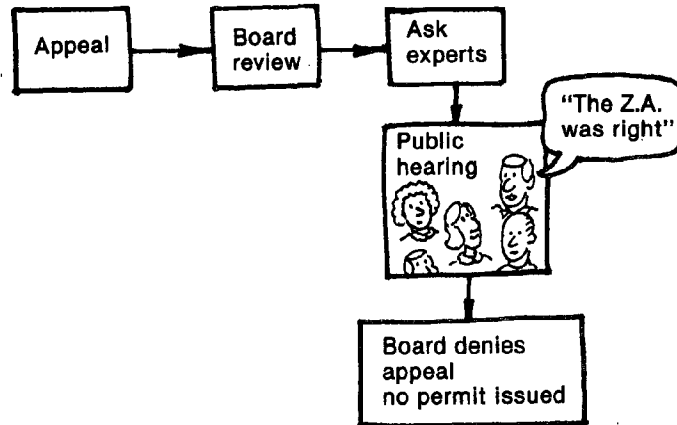
### Criteria.

When a zoning permit is denied based on the zoning administrator's interpretation of the ordinance, and the permit applicant sees a different interpretation (one which would allow the permit to be granted) and appeals the matter, the Board of Adjustment must decide whose interpretation is "correct."

In making decisions on alleged errors, the Board should focus on the legislative intent of the zoning ordinance. Although its determinations are quasi-judicial in nature, the Board of Adjustment functions primarily as an administrative arm of the County Board. Its duty is to preserve the meaning and intent of the zoning regulations, so far as these can be determined. Most ordinances contain an interpretation or compliance section which states that the provisions contained in the ordinance shall be considered minimum requirements, and shall be liberally construed in favor of the governing body (the County Board).

In cases of a disputed district boundary, an engineer, surveyor or soil scientist may be consulted to provide needed technical information. The Board of

Adjustment may also rely on assistance from other county, State or Federal agencies, boards, commissions or staff in the discharge of their duties.



#### Processing an Alleged Error

If a permit applicant feels the zoning administrator made a mistake in interpreting the ordinance or a zoning district boundary, he or she may appeal the decision to the Board of Adjustment. The Board chairperson schedules the hearing, gives proper notice, and follows the correct procedures for conducting a hearing and notifying the permit applicant of the Board's decision. This process is outlined in more detail later in this chapter.

#### SPECIAL EXCEPTIONS: (also called Conditional Uses):

A special exception is a kind of use that can only be allowed after administrative approval by the Board of Adjustment (or, depending on the terms of the ordinance, the Planning and Zoning Committee or the County Board).

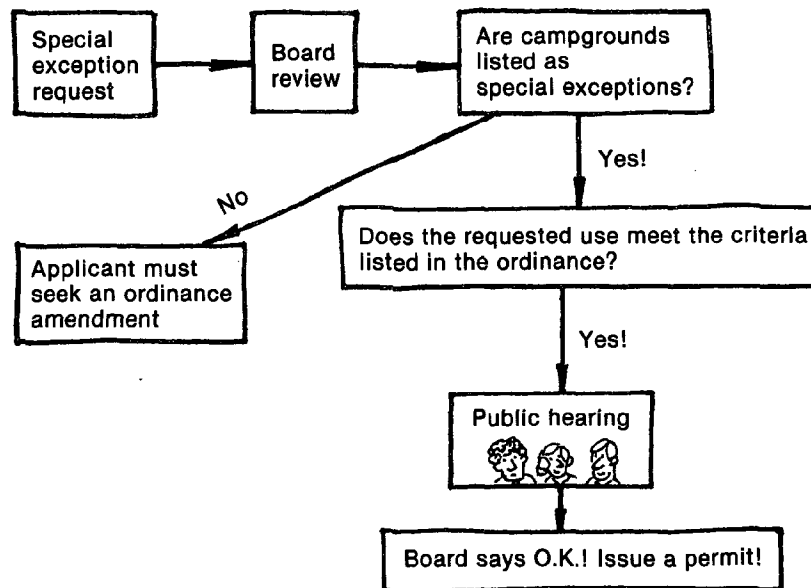
A special exception is different from a variance. While a variance allows an owner to use his or her property in a manner forbidden by the ordinance, a special exception is expressly permitted--but with certain conditions--in the text of the ordinance. Unnecessary hardship does not need to be proven. Uses classified as special exceptions are not inherently inconsistent with others in the zoning district, but may create special problems or hazards if allowed without special conditions.

A special exception is not an administrative appeal. The first time the permit applicant gets a decision on a special exception is from the Board of Adjustment. The zoning administrator has the applicant fill out a special exception permit form, and refers the application to the Board.

## Criteria

To be considered a special exception, the use must be listed as such in the shoreland and floodplain zoning ordinance, along with the standards and conditions which must be met. The conditions are provided to protect adjacent landowners, to handle troublesome uses, and to preserve the character of the surrounding area. The conditions should be clearly spelled out in the zoning ordinance, but occasionally some matters of discretion will be left to the Board. The Board must determine each case carefully to avoid charges of making "arbitrary and capricious" decisions. The Board cannot legally allow a special exception if the conditions listed in the ordinance or required by the Board do not exist or cannot be met.

The conditions for shoreland special exceptions are set out in Section 18.43 of the Shoreland Protection Model Ordinance. The Floodplain Model Ordinance does not list special exceptions within floodplains. Instead, uses are classified as either permitted or prohibited.



## Processing a special exception request

When an individual requests information on the permits required for a proposed land use, the zoning administrator may determine that the proposed use is listed as a "special exception" in the zoning ordinance. The zoning administrator assists the individual with a special exception application form and refers it to the Board of Adjustment for a decision. The Board must conduct a

public hearing, and give written notice to the applicant of its decision. (See the "Meeting and Hearings" section of this chapter for details on hearing procedures.)

Forms to use in processing special exceptions include:

- Land use permit application
- Special exception application
- Notice of public hearing
  - for publication
  - for direct mailing
- Certificate of notice publication
- Special exception permit

Examples of several of these forms are included in Appendix A.

The Board has several options when making its final determination on applications for special exception permits. It may:

- 1) reject the application entirely;
- 2) approve the application in full or in part; or
- 3) approve the application subject to additional reasonable conditions or modifications.

Additional conditions which may be imposed by the Board as a requirement for the special exception permit include landscaping, specified periods of operation, increased setback and yard dimensions, erosion protection measures, etc. Following the public hearing on the special exception request, the Board must notify several parties of its decision. The decision and notification procedures are described in the "Meetings and Hearings" section of this chapter.

#### VARIANCE

A variance is permission granted by the Board of Adjustment to build or develop in a way which is inconsistent with the dimensional standards contained in the ordinance. The variance procedure allows the impact of the general rules to be varied in response to unusual circumstances which constitute "unnecessary hardship." The Board cannot vary the use standards of the ordinance. For example, a variance could not be granted to build a home in a floodway because that type of use is prohibited.

A variance is not a convenience to the property owner. Nor should a variance be granted for reasons common to other properties. (The appropriate remedy would be an amendment to the ordinance.)



## Criteria

In deciding variance requests, the Board of Adjustment acts as the agent of the County Board, not the property owner. It is the Board's duty to preserve the zoning ordinance without modification as far as possible without injustice to the individual.

Variances are intended to be granted infrequently. The applicant for a variance must make a clear showing to the Board that his or her request is due to the very unusual qualities of his or her property and that it satisfies the variance standards.

Here are some general rules which Board members should keep in mind.

### 1) Unnecessary hardship must be proven.

Variances can only be granted where, owing to special conditions, a literal enforcement of the provisions of the ordinance will result in "practical difficulty" or "unnecessary hardship" as defined by the Wisconsin Supreme Court in Snyder v. Waukesha County Board of Adjustment. The court said that "unnecessary hardship can best be defined as a situation where, in the absence of a variance, no feasible use can be made of the land." The court defined the circumstances required to exist for the granting of an area variance as "whether compliance with the strict letter of the restrictions governing area, setbacks, frontage, height, bulk or density would unreasonably prevent the owner from using the property for a permitted purpose or would render conformity with such restrictions unnecessarily burdensome." (See "Court Decisions and Legal Opinions" section of Chapter 6 for more details on this decision.)

In no case may a variance be granted solely as a convenience to the property owner. Practical difficulty and unnecessary hardship do not include conditions affecting the lot in question. Unnecessary hardship does not refer to financial gain or loss.

The burden of proving an unnecessary hardship rests upon the applicant, and without such proof, a variance must be denied. The hardship must also be created by the ordinance. If the hardship is self-created, relief by means of variance may not be granted. Such a situation would arise where hardships result from improvements made in violation of the zoning ordinance, either willfully or innocently. This is known as a self-created hardship, in which case a variance cannot be granted.

If an "after-the-fact" permit is requested and denied for not meeting ordinance provisions, the property owner might request an "after-the-fact" variance. The variance request must be reviewed by the Board as if the project did not yet exist. If the variance is denied, the Board should order removal of the project and restoration of the property to its original condition.

- 2) The condition causing the hardship is unique to that property.

Suppose a group of property owners applied for a variance based on the same reason. Such matters should be handled through an amendment to the zoning ordinance and not by wholesale application of discretionary power of the Board of Adjustment. There is no basis for granting a variance from the provisions of a zoning ordinance unless a particular parcel of land represents peculiar and special conditions.

- 3) The granting of the variance will not be contrary to the public interest or damaging to the rights of other persons or to property values in the neighborhood.

For example, consider an applicant for a land use permit in a residential district who finds that the 30 foot front yard requirement of the ordinance cannot be applied to the particular lot if it is to be used for residential purposes. The lot may be too steep to provide the required yard and still use practical construction methods. In this case, the Board may review the facts relating to the particular lot and might permit the front yard requirement to be reduced from 30 feet to 20 feet without destroying the intent of the ordinance. But, the Board first must determine that the 20 foot front yard on this single property will not significantly disrupt the appearance of the neighborhood or block the vision of the adjoining neighbors or conflict with any of the other purposes which support the general setback rule of 30 feet.

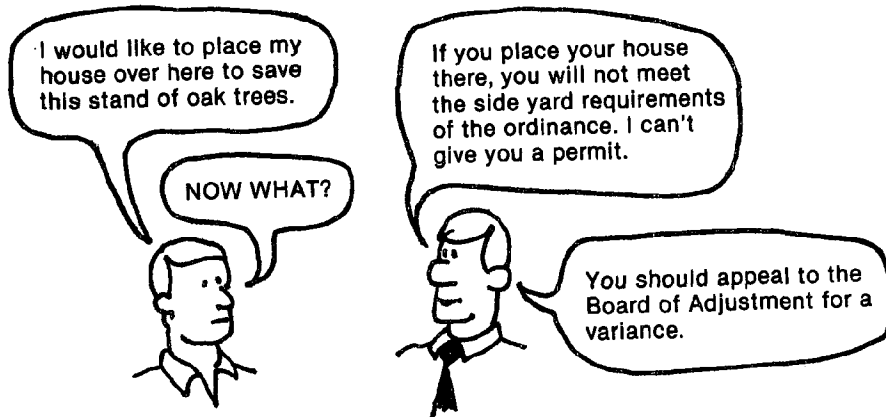
- 4) Variations are not changes in the ordinance. They are rather, modifications in the application of a provision of the ordinance to a particular parcel of land.

In the above example, the ordinance, on its face, still requires a 30 foot front yard in the residential district. Permission to decrease the yard size to 20 feet extends only to the property which was the subject of the variance.

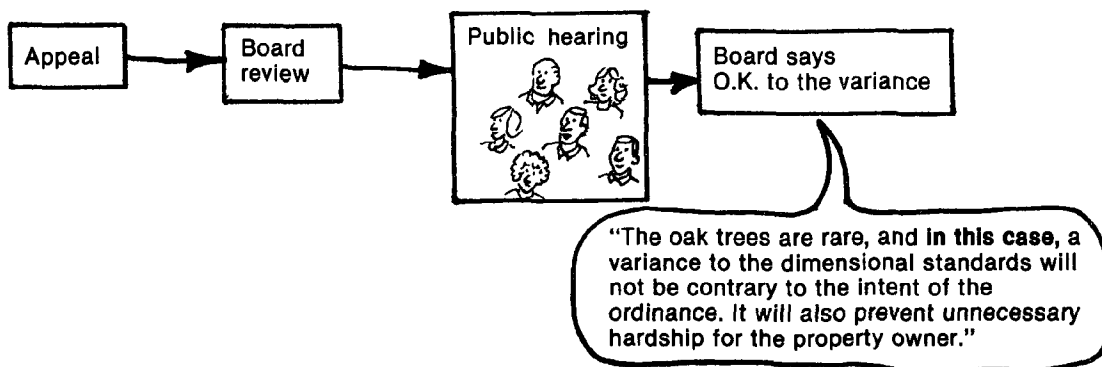
- 5) No variances shall be granted simply because there are no objections, or because those who do not object out-number those who do; nor for any reason other than a proved hardship.

Just because there are no objections expressed to a request at a public hearing doesn't provide justification for granting a variance. A variance is only allowed in "unnecessary hardship" or "practical difficulty" cases that were not self created. The Board must also clearly state in their decision how the applicant has demonstrated unnecessary hardship or practical difficulty before they can grant a variance.

## Processing a Variance Request



When an applicant requests a permit for a use requiring a dimensional variance, the zoning administrator must deny the permit and state the reasons for denial in writing. The zoning administrator should then advise the applicant of his or her right to appeal to the Board and request a variance to the terms of the ordinance. If the applicant does formally appeal, the Board schedules and makes proper notice of a hearing (see the "Meeting and Hearings" section of this chapter for procedural details of a public hearing). Following the public hearing, the Board uses the criteria listed above to decide on the variance request. The applicant is then notified in writing of the Board's decision. An example of a written Board of Adjustment decision is given in the "Case Examples" section of Chapter 6.



# The Planning and Zoning Committee

[NOTE: Much of the material found in this section has been taken from Reviewing, Recommending, and Regulating, prepared by the Department of Governmental Affairs, the University of Wisconsin, Madison.]



## General Information

Need: Community planning was originally conducted on a rather informal basis. Almost any group or individual could initiate and conduct a planning program. Today, planning is widely recognized as a legitimate function of government, and is carried out in a more formal, institutional format. In counties, this format is the Planning and Zoning Committee.

Wisconsin law requires the County Board to create a planning agency whenever it is considering the adoption of a county zoning ordinance. This agency may be any previously established committee of the County Board, or a special committee as authorized by s. 59.97, Wisconsin Statutes.

Purpose: The Planning and Zoning Committee is the local government body charged with handling various planning responsibilities in the community. Its primary function is to advise the County Board on planning matters. As an advisor, the basic responsibility is to develop community plans which reflect local policy, and serve as a decision-making guide for the County.

A major responsibility of the Committee is that associated with regulating land use. The Committee is required by State Statute to review and make recommendations on various zoning and subdivision activities. Depending on the local ordinance, the Committee may also have final approval authority over subdivision plats and special exception permits.

Who is the Planning and Zoning Committee? In Wisconsin, the P&ZC is made up of County Board members or citizens appointed by the County Board. Committee membership often consists of the following:

- a. The County Highway Commissioner
- b. The County Park Commissioner
- c. Three members of the County Board (as selected by the Board)
- d. Two citizen members (selected by the County Board) who reside in and own property in the County.

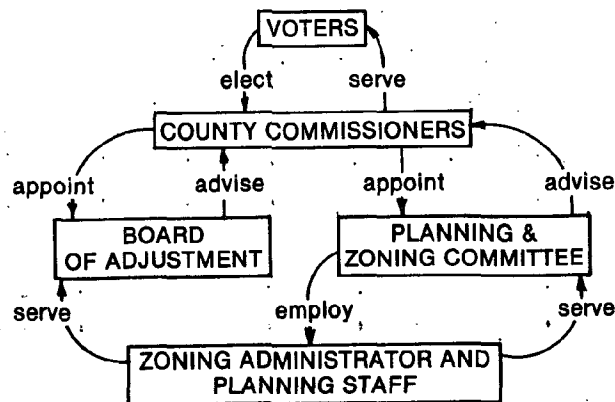
How Does it Work? As indicated before, the P&ZC is primarily an advisory group to the County Board on planning and zoning issues. The County Board directs the P&ZC in its planning activities, which most often relate to local land use issues. The Board may also ask the Committee to undertake other planning studies such as bike path feasibility, reapportionment, space allocation in municipal offices, etc.

According to the Statutes, the P&ZC may employ technicians and other staff to help carry out their duties and responsibilities. The staff provides the Committee with advice, data, reports and recommendations.

In developing plans, the P&ZC is to plan on behalf of the community. This means the Committee must continually evaluate the changing resources, values and goals of the community, and advise the County Board as appropriate. It is to balance governmental with private interests in developing plans, and act as a liaison between the governing body, the public and the planning staff.

Relationships between the County Board, the Planning and Zoning Committee, the Zoning Administrator and the Board of Adjustment

The following diagram summarizes the relationships of the major local government bodies that deal with land use and zoning.



## Duties of the Planning and Zoning Committee

The Planning and Zoning Committee is responsible for duties delegated to it by the County Board. These duties usually include:

- Drafting of zoning ordinances.
- Reviewing proposed zoning ordinance amendments.
- Overseeing the administration of ordinances.
- Overseeing the operation of the planning staff.
- Reviewing land subdivision plats.
- Approving or disapproving special exception (conditional use) permits.

## THE ZONING ORDINANCE

County boards are authorized to adopt zoning ordinances for areas outside incorporated limits of cities and villages. The Planning and Zoning Committee usually takes responsibility for initial drafting of the ordinances. It also holds public hearings on the proposed ordinance, and may make changes to it before submitting it to the County Board for approval. The Planning and Zoning Committee has similar responsibilities when the County plans to adopt a comprehensive revision or amendment to an existing ordinance.

## ZONING ORDINANCE AMENDMENTS

When desired projects fall outside the permitted or special exception use classifications, rezoning through an amendment to the ordinance is the only channel for pursuing a permit. Requests for amendments are initiated by a petition and filed with the county clerk. This petition may be filed by:

- 1) Any member of the County Board,
- 2) Any member of the Planning and Zoning Committee, or
- 3) Any property owner in the area to be affected by the proposed amendment

For general zoning amendments, members of the affected Town Board may petition for an amendment. But for shoreland and floodplain amendments enacted under ss. 59.971 and 87.30, towns have no overriding authority. Therefore, Town Board members may not initiate rezoning procedures.

The county clerk refers the petition to the Planning and Zoning Committee for their review and recommendation.

Typical amendment requests include:

- 1) Amending the zoning district map to rezone a parcel of land from one district to another, and
- 2) Amending the ordinance text to clarify or change a provision.

The amendments can range from minor "mere formality" changes, to major battles between opposing political viewpoints and interest groups. It is the Planning and Zoning Committee's responsibility to study the facts and opinions, and make a recommendation to the County Board on the amendment petition. The County Board may heed the advice of the Committee, make a contrary decision, or send the proposal back for further study. The Committee's recommendation must balance the various interests and be consistent with County policies, and promote the best interest of the community.

A public hearing must be held on all amendment petitions. If an affected person wishes to appeal the adoption of zoning ordinances or amendments, he or she must do so within six months after adoption, according to s. 59.97(14), Wisconsin Statutes.

While the county has broad authority to amend a comprehensive zoning ordinance, the County Board should remember that floodplain and shoreland zoning ordinances must comply with minimum State standards. Floodplain amendments that are not approved by the DNR are invalid, and shoreland amendments that are less restrictive than those in the State standards, may be overridden. The State may adopt shoreland and floodplain regulations on behalf of any county, city or village which fails to adopt reasonable and effective requirements.

#### ADMINISTRATION OF ZONING ORDINANCE(S)

When drafting the zoning ordinances, the Planning and Zoning Committee must include provisions for administering the ordinances. The approach generally used in Wisconsin counties is to designate a zoning administrator, a Board of Adjustment, and a system of permits for all buildings and future land uses.

After the ordinance is adopted and the administrative system established, the Planning and Zoning Committee has a responsibility to oversee the administration of the ordinance. This duty includes observing the activities of both the zoning administrator and the Board of Adjustment. The Committee should pay particular attention to difficulties the administrators are having with poorly written regulations, or changing conditions that make part of the ordinance inappropriate or obsolete. The Committee can perform a very important function by determining, through consultation and study, what is needed to correct the situation. It can then make a recommendation to the County Board for needed ordinance amendments.

## LAND SUBDIVISION PLATS

Reviewing subdivision plats is one of the most important responsibilities of the Planning and Zoning Committee. Subdivision developments are closely regulated because they have a significant impact on patterns of community growth.

Major statutory authority for regulating the subdivision of land in Wisconsin is found in the state platting law, Chapter 236, Wisconsin Statutes. The purpose of this Chapter is to:

"regulate the subdivision of land to promote public health, safety and general welfare; to further the orderly layout and use of land; to prevent the overcrowding of land; to lessen congestion in the streets and highways; to provide for adequate light and air; to facilitate adequate provision for water, sewerage, and other public requirements; to provide for proper ingress and egress; and to promote proper monumenting of land subdivided and conveyance by accurate legal description."

Any municipality which has established a planning agency may adopt ordinances regulating land subdivision under s. 236.45, Wisconsin Statutes. Chapter NR 115, Wisconsin Administrative Code, requires counties to review land divisions in shoreland areas which create three or more lots of five acres each or less over a period of five years or less. Local ordinances must contain subdivision requirements and standards at least as restrictive as those given in State Statutes and Administrative Codes.

Proposed subdivisions must obtain the certification of a number of state and local agencies. Under Wisconsin law, these agencies are broken down into two categories: "approving" agencies and "objecting" agencies.

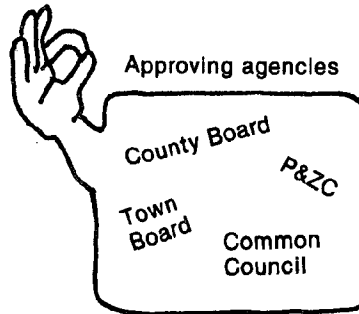
- a. Approving Agencies: are local government bodies vested with review and approval authority over proposed subdivisions. The platting law permits the local legislative body to delegate final approval authority to the Planning and Zoning Committee. Normally, the County Board retains final approval authority while the Planning and Zoning Committee reviews proposed subdivisions against local ordinances and makes recommendations to the County Board regarding their approval.

The following agencies are also considered "approving authorities," and their approvals are necessary before the plat can be recorded:

- 1) The Town Board of the town in which the plat is located.
- 2) The Common Council of a city, or Village Board of a village if the plat lies within the extra territorial jurisdiction of the city or village (i.e. 3 miles from the limits of a first, second or third class city, or 1 1/2 miles from the limits of a fourth class city or village).



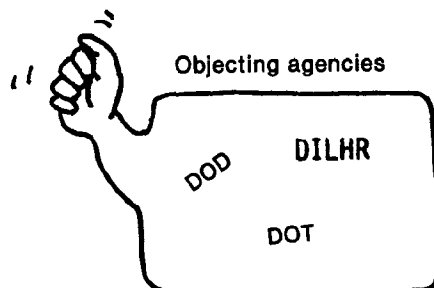
3) Other local or regional planning commissions may have approval authority.



b. Objecting agencies: are almost always a State agency which is required by law to review plats and certify "non-objection" to them. The objecting agencies must complete their review before the approving agencies can complete theirs. The following State agencies have objecting authority over proposed subdivisions, depending on the particular characteristics of that subdivision:

- 1) Department of Development - checks all plats submitted to it for surveying accuracy, checks a few "layout" standards, and serves as a clearinghouse for the reviews by other objecting agencies.
- 2) Department of Industry, Labor and Human Relations - checks only those plats that do not have public sewer service, and reviews the plats against standards dealing with lot size, slope, bedrock and groundwater to assure there is adequate area on each lot for a suitable on-site waste disposal system.
- 3) Department of Transportation - checks only those plats which abut State trunk highways or urban streets which connect segments of State highways. This agency is particularly interested in controlling points of access to state highways or connecting streets, and road drainage.

A certification of no-objection from these agencies is a requirement before the plat can be recorded, and no local authority, such as the Planning and Zoning Committee, may approve a plat if any of these agencies has made an objection. If the subdivider corrects the reason for the objection, and a second review by the agencies results in no-objections, the approving agencies can complete their review.



It is the Planning and Zoning Committee's responsibility to enforce the subdivision regulations adopted by the County Board, by withholding approval from plats that do not comply with the regulations. The determination of compliance may involve some extensive field examinations, and the Committee should have staff available to make these surveys. If the Committee has reason to believe that the proposed subdivision may cause problems overlooked by the appropriate objecting agency, that agency should be contacted to conduct any necessary field surveys.

After reviewing the proposed plat, the Planning and Zoning Committee may recommend that the plat be approved by the County Board and may recommend that some additional requirements be imposed. The County is authorized by s. 236.13, Wisconsin Statutes, to make additional conditions of approval.

#### SPECIAL EXCEPTION (CONDITIONAL USE) PERMITS

In some jurisdictions, the Planning and Zoning Committee is designated as the body responsible for approving or disapproving applications for special exception permits. As described in the Board of Adjustment section of this chapter, special exceptions (conditional uses) are land uses allowed in a zoning district only after a hearing and approval by the designated body.

If the Committee denies an application for a special exception, the applicant may appeal the decision to whatever county agency or officer the county has designated. In most situations, the Board of Adjustment hears such appeals.

The Attorney General issued an opinion that the Board of Adjustment cannot hear appeals to special exception decisions made by the Planning and Zoning Committee (see 69 Opinions of the Attorney General 146 (1980)). However, an applicant for a special exception permit has the right to appeal an unfavorable Planning and Zoning Committee decision to the independent appeal body designated by the county pursuant to Chapter 68, Wisconsin Statutes. A county may designate the Board of Adjustment as the independent appeal agency, or it may designate any other independent county board or agency to hear appeals of decisions issued by the Planning and Zoning Committee.

If the decision of the independent appeal body is unfavorable, the applicant may seek judicial review by petitioning for a writ of certiorari under s. 68.13, Wisconsin Statutes.

# Meetings and Hearings

The County Board must adopt rules for the conduct of business by the Board of Adjustment and the Planning and Zoning Committee. The procedures must provide for a public hearing to gather all facts from both sides. The Board and Committee may adopt further rules as necessary.

## Suggested Rules of Order

The following is a set of suggested rules of order for the Board and Committee:

### A. Officers

- 1) The Board and Committee must each elect a chairperson and may elect a vice-chairperson from its membership. The vice-chairperson will serve when the chairperson is absent or unable to serve.
- 2) The Board and Committee should each elect one member to act as secretary, to serve until replaced, or they may ask a member of the zoning staff to act as a nonvoting, recording secretary. The secretary should either tape record the meeting, or contract the services of a professional hearing recorder to produce a complete transcript of the meeting.

### B. Duties

- 1) The chairperson presides at all meetings and hearings, and directs the conduct of the sessions.
- 2) The secretary conducts all official correspondence of the Board, receives and files applications, sends out notices and keeps or supervises the keeping of Board or Committee records. The secretary is responsible for recording meeting proceedings and keeping complete written meeting minutes. Staff from the Planning and Zoning staff may assist the secretary with these duties.

### C. Rules of Conduct

The County Board must adopt rules for the Board's conduct of business in accordance with the provisions adopted in the zoning ordinance(s). The Committee may adopt its own rules of conduct, subject to change by the County Board. Further rules may be adopted, including if desired, Robert's Rules of Order.

## Scheduling Meetings and Hearings

- 1) A standard monthly meeting day should be established (e.g. the second Tuesday of each month), along with a standard meeting place, and time to begin.
- 2) At any meeting, the Board or Committee may set a date for the hearing on any appeal, or application filed with it. The secretary may

be asked to schedule the hearings subject to approval of the Board or Committee.

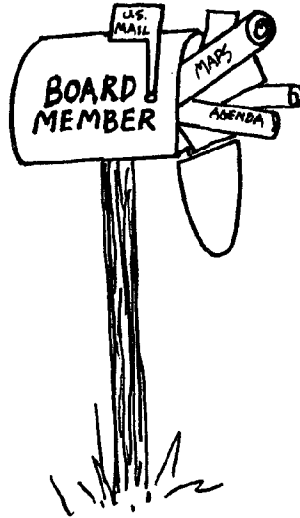
- 3) Any meeting may be cancelled by majority vote of the members at a previous meeting. A meeting may also be cancelled by call of the chairperson not less than 24 hours before the time established. If at least three members (or two in the case of a three-member Board) request the meeting be held despite the chairperson's call, the meeting may not be cancelled.
- 4) Regular meetings and additional special meetings may be held at times other than the standard schedule, by majority vote of Board or Committee members at a previous meeting, or by at least a 24-hour advance call of the chairperson.

#### Notification Requirements

- 1) All meetings and hearings must be open to the public except that an executive session may be called at the conclusion of any hearing to reach a decision on the case(s) presented. Hearings must be advertised with a class 2 notice under Chapter 985 and notice as required by section 19.84, Wisconsin Statutes, must also be given.
- 2) The Board and Committee are required by law to publish a class 2 notice for each public hearing to be held. Class 2 notices must appear in a newspaper that is published in the county (or in the "official newspaper" designated by the county), on two consecutive weeks with the last publication occurring at least seven days prior to the hearing. "Due notice" must also be given to the parties in interest by mail. The parties in interest include:
  - a. The applicant (the owner of the property for which a permit is sought, or the owner's agent).
  - b. The appellant or petitioner (the person aggrieved by the action of the zoning administrator, or the municipal officer or agency, that has appealed or filed a petition on the matter).
  - c. The DNR Area or District office if the "issue" is located in a shoreland or floodplain area.
- 3) To comply with the class 2 notice requirements and the open meeting law, the following information should be published:

<ul style="list-style-type: none"><li>•Location and time of hearing</li><li>•The applicant/appellant/petitioner's name</li><li>•Location of property involved</li><li>•Nature of the request</li><li>•Time of any deliberative sessions</li><li>•Who should attend the hearing (i.e. concerned, affected or interested persons).</li></ul>
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- 4) Several days prior to the meeting, Board or Committee members should receive an agenda of the order and contents of the upcoming meeting. The agenda should be supplemented by a packet of applications, maps and reports prepared by the zoning staff on matters scheduled to come before the Board or Committee.



#### Conducting the Hearing

The Board of Adjustment and Planning and Zoning Committee are required to hold a public hearing for all administrative appeals, variances, special exception and amendment cases they handle. The purpose of the hearing is to give applicants, appellants, petitioners and interested citizens an opportunity to present their views on a case before the Board or Committee makes a final decision. The hearings should be tape recorded and complete minutes and copies of all maps, charts and other exhibits should be kept.

- 1) The chairperson is responsible for conducting the hearing.
- 2) The chairperson calls the hearing to order and takes a roll call of all the members present.
- 3) The chairperson (or secretary) reads a description of the appeal, application, or petition.
- 4) The chairperson asks for the reasons for denial of the original request, if there was a denial, which may be read by the zoning administrator.
- 5) The chairperson asks the appellant or petitioner to state his or her case and answer questions the Board or Committee may have. If the appellant or petitioner is not present or represented, the case may be tabled or dismissed.

- 6) The chairperson asks if there are other persons who wish to speak in favor of the proposal.
- 7) The chairperson asks for rebuttals or opposition to the proposal.
- 8) When all those wishing to speak have been heard, the chairperson declares the hearing to be closed. If the Board's or Committee's decision is to be rendered at a later date, the chairperson should indicate such to those present at the hearing.

#### Deliberative Sessions

A short executive session may be called at the conclusion of any public hearing, or at a later date, to decide a case. All non-Board or non-Committee members in the meeting room may be asked to leave except the recording secretary and the legal counsel. The Board or Committee should review the case and use the appropriate guidelines in voting on a decision. A quorum consists of a majority of all the Board or Committee members. No action may be taken without the affirmative vote of a majority of the quorum.

All decisions shall be made in writing and contain the facts upon which the decision is based.

#### Follow-Up

Within a reasonable time after the close of the hearing to which the decision relates (preferably not later than 10 days), copies of each decision must be delivered to:

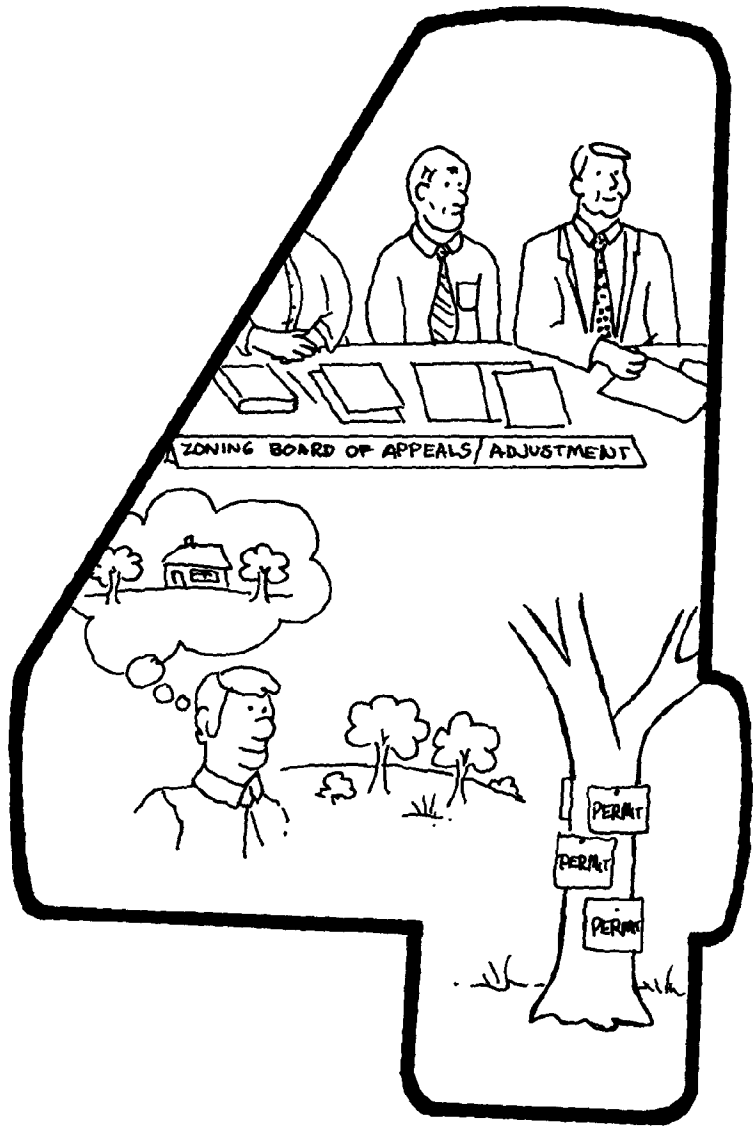
- The County Board Supervisor and Town Board Chairman.
- The zoning administrator, with a written order to issue, deny or modify if the decision concerned a permit.
- The applicant, appellant, or petitioner.
- Other parties of record.
- The Area or District office of the DNR if the decision concerned a floodplain or shoreland area.

All conditions imposed upon approving (or recommending to approve) an application, appeal or petition shall be stated in the written decision.

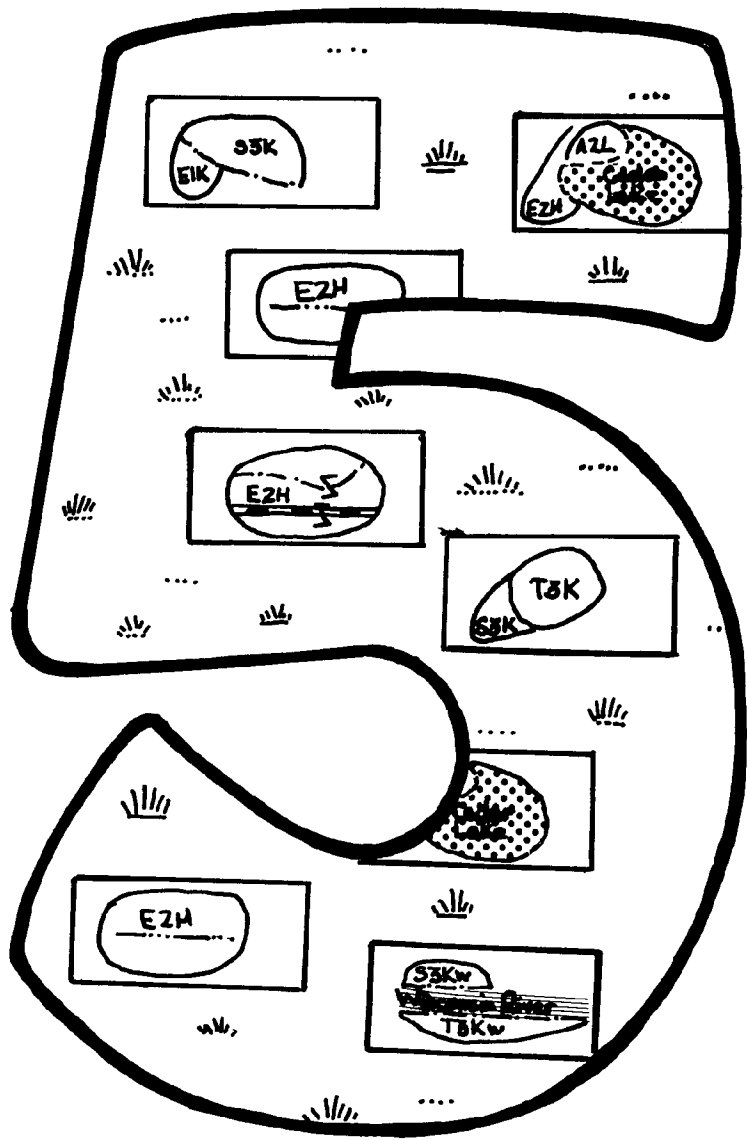
#### Report of Activities

The Board of Adjustment is usually required to submit an annual report of its activities during the preceding year to the Planning and Zoning Committee. The Committee transmits the report to the County Board.

The County Board may request monthly, quarterly or annual reports from the Planning and Zoning Committee on its activities. These reports should give the County Board the information it needs to make decisions on county land use and related issues.



# ADMINISTERING ZONING PROGRAMS



**RELATED PROGRAMS**



# National Flood Insurance Program

In 1968, Congress created the National Flood Insurance Program to make flood insurance available at Federally subsidized rates to property owners in flood prone areas, provided the community agrees to adopt local regulations to protect lives and new construction from future flooding. The model ordinance included in the appendix to the manual was developed to meet both State and Federal standards; therefore, adoption of the ordinance would enable Wisconsin communities to comply with Federal flood insurance requirements.

The program is intended to work as follows:

- a) The Federal Emergency Management Agency (FEMA) formally notifies the community that it has a flood hazard area, by issuing a Flood Hazard Boundary Map (FHBM).
- b) The community submits an application to FEMA and assures that it will regulate development in the flood hazard area. The community is then eligible for the emergency phase of the program. "Emergency phase" does not mean the community is in a state of emergency. It means that the community has become eligible for the sale of subsidized flood insurance despite the fact that the community's actual degree of flood hazard is not yet known.
- c) FIA provides funds for a flood insurance study to determine:
  - 1) Insurance rates which reflect the risks associated with the community's flood hazard areas.
  - 2) Flood profiles which show the regional flood elevation through the community's flood hazard area.
  - 3) A floodplain map which shows the community's flood hazard area.
- d) The community upgrades its floodplain regulations to incorporate the additional flood data. The community then enters the regular phase of the program and becomes eligible for additional flood insurance at rates reflecting the actual degree of flood hazard.

## Available Rates

When a community initially qualifies for the sale of flood insurance under the Emergency Program, limited amounts of coverage are available at subsidized rates for virtually every building, as well as contents, regardless of risk. After FEMA's detailed Flood Insurance Rate Map has been prepared, and the community enters the Regular Program, the available limits of coverage are double those available under the Emergency Program. The second layer of coverage at actuarial (nonsubsidized) rates is available together with the subsidized first layer of coverage for all existing structures, regardless of location. Both layers of coverage under the Regular Program for new structures in the identified special flood hazard areas are made available at actuarial rates reflecting the degree of flood risk for each property.

### Who Must Buy Flood Insurance?

Flood insurance must be purchased as a condition of obtaining Federal financial assistance for the construction or acquisition of buildings in the identified special flood hazard areas of communities. This requirement includes direct Federal financial assistance such as grants, SBA and FHA loans, VA and FHA mortgage loans. If the community is participating in the National Flood Insurance Program, it also includes conventional construction and mortgage loans from Federally insured, regulated or supervised lending institutions (e.g., banks insured by FDIC, savings and loan institutions insured by FSLIC or regulated by the Federal Home Loan Bank Board, credit unions insured by the National Credit Union Administration, banks regulated by the Comptroller of the Currency or the Federal Reserve Board).

For more information call FEMA at the following toll free number 1-800-638-6620.

## Wisconsin Flood Hazard Mitigation Program

Part of the Wisconsin Floodplain Management Program includes a special "sub-program" dealing with flood hazard mitigation. The program is one of information and education for local citizens in communities where flooding is a problem.

Flood hazard mitigation is anything we do today that lessens the impact of the next flood. Examples of flood hazard mitigation include:

- Elevating a house in a flood hazard area so that it is above the flood level and no longer subject to damage;
- Relocating structures in a floodway to high ground, away from the hazard zone; and
- Developing flood warning systems to quickly move people and damageable equipment to safe areas.

Flood hazard mitigation plans should be developed by every community that experiences flood damage to existing buildings.

The Division of Emergency Government in cooperation with DNR is sponsoring workshops throughout the State urging local government officials to initiate flood hazard mitigation efforts into their communities. Workshop participants include elected and appointed officials, developers, and concerned private citizens. The participants address local flood problems and try to develop a flood hazard mitigation plan for their own community as part of the training exercise. The first step is to learn about the nature of the flood problems in their community. Then after inventorying their resources, analyzing possible solutions, and forecasting results, the participants choose the most economically, socially, and aesthetically beneficial alternatives. Workshop participants can take this information back to others in their community and work toward implementing flood hazard mitigation plans.

The flood hazard mitigation program recognizes that the key to solving flood problems is at the local level. The State can provide assistance, but the community must take the lead in trying to protect its people and property from floods.

## **Wisconsin Floodplain and Shoreland Mapping Grants Program**

The goal of Wisconsin's floodplain management program is to protect private and public property from flood damage. The goal of the state's shoreland management program is to protect the environment, human health and aquatic life.

Wisconsin law requires local governments to adopt floodplain and shoreland ordinances. Most communities, however, lack the detailed topographic maps necessary to effectively enforce these laws. Now, grants are available to help local governments defray the cost of preparing adequate topographic maps.

The Wisconsin Legislature created this grant program in 1979. Derived from general revenues and administered by the DNR, \$180,000 will be available annually through grants covering 50% of eligible costs.

### **Mapping Grant Applications**

The DNR will accept grant applications from cities and villages that have adopted DNR approved floodplain ordinances. Counties that have passed floodplain or shoreland ordinances may also apply to the DNR for a mapping grant.

In lieu of a floodplain/shoreland ordinance, the municipality may impose a moratorium on issuance of all building permits in the floodplain/shoreland area until maps are completed and ordinances adopted.

### **Eligible Grant Costs**

The following services are eligible to receive grant money under the Mapping Grants Program:

- Ground control survey, including relocation and replacement of Public Land Survey monuments
- Aerial photography
- Topographic mapping
- Floodplain, floodway and shoreland delineation
- Map printing

For further information, contact the appropriate DNR Area or District Office.

# **NR 118 — Standards and Criteria for the Lower St. Croix National and Scenic Riverway**

The States of Wisconsin and Minnesota have taken measures beyond the zoning standards set forth in State floodplain and shoreland management programs, to protect the Lower St. Croix River. In Wisconsin, the more restrictive minimum zoning standards for the Lower St. Croix are listed in NR 118, Wisconsin Administrative Code. The additional standards are necessary to:

"...reduce the adverse effects of overcrowding and poorly planned shoreland development, to prevent pollution and contamination of surface and groundwaters and soil erosion, to provide sufficient space on lots for sanitary facilities, to minimize flood damage, to maintain property values, to preserve and maintain the exceptional scenic and natural characteristics of the water and related land of the lower St. Croix River valley in a manner consistent with the national wild and scenic river act (P.L. 90-542), the Federal lower St. Croix River act of 1972 (P.L. 92-560) and the Wisconsin lower St. Croix river act (chapter 197, laws of Wisconsin, 1973)."

NR 118 provides zoning guidelines to the local communities along that portion of the Lower St. Croix included in the national wild and scenic rivers system to implement, administer and enforce the minimum standards. The standards refer to land uses and activities, and apply to the banks, bluffs and bluff tops of the Lower St. Croix.

Primary responsibility for management of the NR 118 program is with the West Central District office of the DNR. Questions about the program can be directed to that office.

## **Wisconsin Wetland Mapping Program**

### **Background**

People are becoming more aware of the importance of wetlands. This recent upsurge in support for wetland protection has uncovered the need for accurate wetland maps. Provisions for wetland mapping have been included in several of the recent Wisconsin wetland protection bills because existing resource maps are considered inadequate for inventory or regulatory purposes. As a result, the Wisconsin Legislature, in 1978, created a statewide wetlands mapping program within the DNR. This program is known as the Wisconsin Wetlands Inventory. Wisconsin Statutes 23.32(1) requires the DNR to identify as accurately

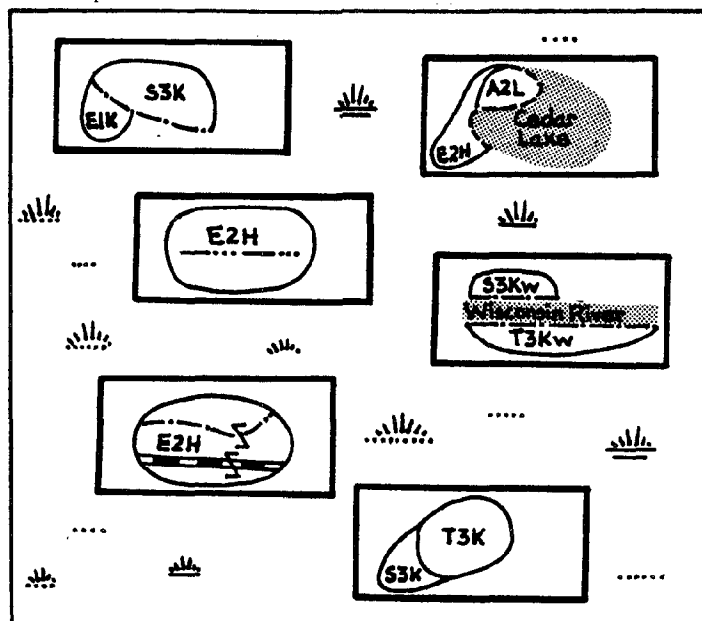
as is practicable the individual wetlands in the State which have an area of five acres or more. Production of maps for the Wisconsin Wetlands Inventory began in 1979. By July 1, 1983, all of the State's wetlands will be mapped. These maps will be essential to county identification and assessment of wetlands for inclusion in a shoreland-wetland zoning ordinance.

### Mapping Procedure

A staff of DNR experts interpret and delineate wetland boundaries on black and white infrared aerial photographs. These photos were taken no earlier than 1978 by Clyde Williams & Associates and Chicago Aerial Survey, Inc.

After the wetlands are delineated they must be classified. The wetland classification system used by the Wisconsin Wetlands Inventory is based on the new U.S. Fish and Wildlife Service "Classification of Wetlands and Deep-water Habitats of the U.S.", but with a few simplifications to make it easier to use and understand.

Once the interpretation is completed for a township another staff member checks the photos to maintain mapping accuracy and consistency. Then the original interpreter conducts a field check to verify his/her accuracy and clear up any discrepancies that occur between the interpreter and checker.



The Wisconsin Wetlands Inventory classifies the State's wetlands according to vegetation, cover-type, hydrology, human influence factors, and special wet-

land characteristics. According to this system, wetland vegetation consists of seven major classes or cover types, with a number of subclasses for more precise definition. The major cover types include:

- Aquatic bed plants
- Sphagnum moss
- Marsh and wet meadow plants
- Wet shrubs
- Wet forests
- Shallow open water
- Unvegetated wet soil

### Wetland Mapping and the Shoreland-Wetland Program

The Natural Resources Board, recognizing the need to protect Wisconsin's wetlands, recently modified NR 115 to provide more uniformity in county regulation of wetlands in shoreland areas.

Wetland maps will be essential to county identification and assessment of wetlands for inclusion in a shoreland-wetland zoning ordinance. When the preliminary maps are sent out to the county zoning office, the zoning administrator will have at least 90 days to review them. If anyone perceives errors on a wetland map and wishes to file a complaint, they may testify before the county zoning agency at a hearing held by the zoning agency on the preliminary maps. A local newspaper will report the date, time and place of the hearing. Maps will be available for public review at the county zoning office prior to the public hearing.

The county will then send back the maps with inaccuracies noted, and the DNR will schedule a meeting with county zoning staff within 30 days to discuss alleged inaccuracies. The DNR will then publish final inventory maps and distribute them to the county. Once counties receive their final maps, they have six months to adopt a shoreland-wetland zoning ordinance.

Further information on the technical qualities of the wetland maps can be obtained from:

Wetland Mapping Unit  
DNR Bureau of Planning  
P.O. Box 7921  
Madison, WI 53707

Information on the regulatory aspects of wetlands can be obtained from DNR Area or District offices.

## Wisconsin Coastal Management Program

Shoreline erosion is a significant problem along substantial parts of Wisconsin's Great Lakes coast. Structures located in erosion hazard areas are subject to damage from undermining and flooding. Shore erosion is a natural process which has been taking place for many thousands of years. It cannot be

halted, but people's actions can speed it up or slow it down. People can also adjust land use to the erosion hazard in a way that minimizes damage. Severe property losses have resulted from development which failed to take erosion into account.

Since 1974 the Wisconsin Coastal Management Program has researched coastal management problems and needs; developed methods for regulating coastal land use to reduce erosion losses; and supported a number of technical staff positions to provide assistance to coastal communities in protecting their coastlines.

#### Relationship to Shoreland Zoning Program

All Wisconsin coastal counties have adopted shoreland regulations which include zoning ordinances and subdivision regulations which apply to the unincorporated portions of the Great Lake shorelands. County shoreland regulations were designed primarily for inland lakes, and most do not take into account the special erosion hazards of the Great Lakes. Therefore, efforts have been made to use the organization and staff experience of the DNR shoreland management program in giving coastal counties the extra attention needed to address the severe erosion problems.

The Wisconsin Coastal Management Program has supported several staff positions in the DNR to help strengthen the shoreland protection program in coastal communities. Through the additional funding, DNR staff have been able to assist in improving shore management by preparing guidelines and training sessions for coastal communities interested in adopting an ordinance to minimize erosion losses. Staff have also been able to develop evaluation techniques, and conduct performance reviews of local shore management programs. Overall, the Coastal Management Program has helped improve DNR knowledge and efficiency in protecting shorelands in coastal areas.

For more information and assistance in the area of coastal management, contact the appropriate DNR Area or District Office.

## **Wisconsin Construction Site Runoff and Erosion Control Program**

The DNR Bureau of Water Quality Management Planning has launched an on-going technical assistance program for communities experiencing problems with runoff and erosion from construction sites. A number of informational materials have been developed, and are for use by local governments wishing to address the problems of runoff and erosion control. The materials are helpful in describing the problem, presenting the benefits of addressing the problem, and providing a variety of options the community can apply to help solve the problems.

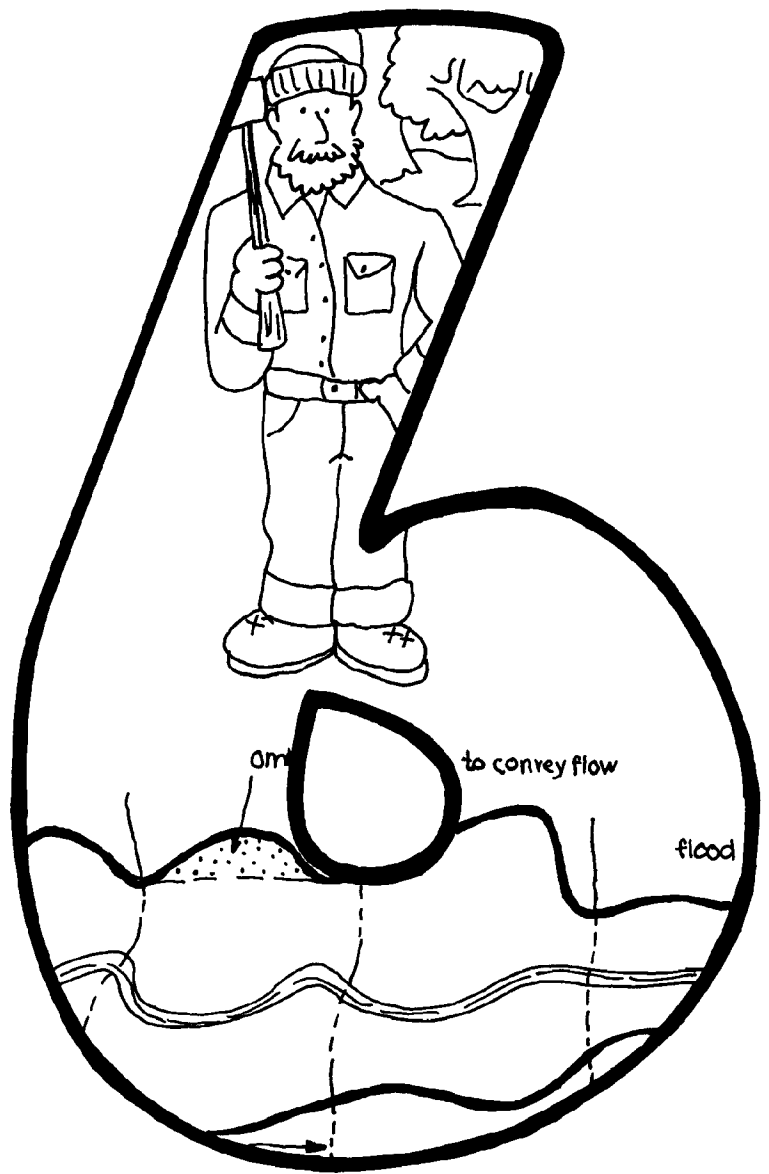
## Relationship to Shoreland Management Program

Wisconsin's Shoreland Zoning Law provides a means for regulating land use near waterbodies. The law requires all counties to enact and administer shoreland zoning ordinances. Ordinances must include certain minimum standards established by the DNR, although counties are authorized to enact stricter standards if they desire.

Shoreland ordinances can be written to prohibit or limit land uses that result in water pollution. All counties in Wisconsin have enacted shoreland ordinances that have some general provisions for controlling nonpoint source pollution. Counties can use their authority for shoreland zoning to include additional provisions specifically addressing pollution from construction sites.

For more information on construction site runoff and erosion problems and solutions, contact the DNR's Water Quality Management Planning Bureau. The DNR can provide informational materials, and can assist with development and review of proposed programs.





# SPECIAL HELPS

# Case Examples

## ALLEGED ERROR - Bob McBuilder

Situation: Bob McBuilder asks the zoning administrator to tell him exactly where the floodplain zoning district boundary is in relation to his property. The zoning administrator informs Bob that the boundary runs right through his land. Bob tells the zoning administrator he's nuts and that the maps were prepared by an idiot. He insists that the maps are wrong and requests a map interpretation. The zoning administrator tells Bob that the maps may be wrong, but the ordinance gives him no alternative.



### Question:

Who settles this dispute?

### Answer:

The BOARD OF ADJUSTMENT.

1. Bob McBuilder alleges there is an error in the floodplain maps, and files an appeal or request for an interpretation with the zoning administrator.
2. The zoning administrator forwards the matter to the Board of Adjustment.

3. The Board of Adjustment sets a time for a public hearing and publishes a class 2 notice.
4. The Board of Adjustment holds a public hearing on the appeal interpretation. Experts (engineers) may be called on to give their technical evaluation of where the flood limits are.
5. The Board of Adjustment votes on the appeal interpretation.

6. EITHER: ↘

The Board of Adjustment grants a favorable interpretation, and directs the zoning administrator to initiate a map amendment petition to the Planning and Zoning Committee.

THEN WHAT?

Following an official map amendment, the zoning administrator may issue Bob a permit.

OR: ↘

The Board of Adjustment decides against the appeal interpretation.

THEN WHAT?

Bob may appeal to a court of record.

SPECIAL EXCEPTION - Fred Birchlog

Situation: Fred Birchlog wants to cut a row of trees from his shoreland property to help pay for his property taxes. The trees he wants to cut are within 35 feet of the shoreline. On applying for a permit, he discovers that tree cutting is listed as a "special exception" in the ordinance and must be approved before he can begin cutting.



Question:

Who is responsible for approving or disapproving Fred's application for a "special exception" permit to cut his trees?

Answer:

The BOARD OF ADJUSTMENT or the COUNTY PLANNING AND ZONING COMMITTEE, depending on the ordinance.

1. Application is made to the zoning administrator.
2. The zoning administrator refers the application to the Board of Adjustment or Planning and Zoning Committee.
3. The Board or Committee sets a time for a public hearing and publishes a class 2 notice.
4. The Board or Committee holds a public hearing on the special exception request.
5. The request is voted on by the Board or Committee.

6. EITHER: ↘

The Request is approved according to the conditions listed in the ordinance.

THEN WHAT?

The Board or Committee directs the zoning administrator to issue a special exception permit to Fred.

OR: ↘

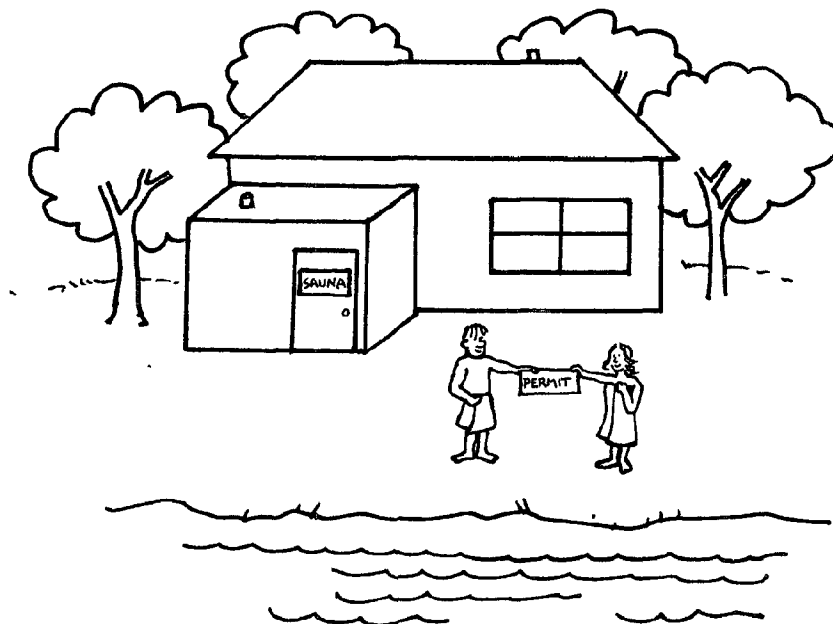
The Request is denied

THEN WHAT?

Fred may appeal to a court of record.

VARIANCE - John and Cookie Dough

Situation: John and Cookie Dough applied for a permit to build an addition onto their lake home for a sauna and whirlpool. They wanted the addition to face the lake, which would also save cutting any trees on the property. Unfortunately, the proposed addition would violate the setback requirements of 75 feet from the shoreline. The Dough's claim that strict enforcement of the setback requirements would be an unnecessary hardship, as alternative addition sites would require sacrificing many trees, which would violate the shoreland regulations on tree cutting.



Question:

Who decides whether or not John and Cookie can build their addition as proposed?

Answer:

The BOARD OF ADJUSTMENT.

1. The zoning administrator denies a building permit because the setback requirements of the zoning ordinance cannot be met.

2. Appeal is made to the Board of Adjustment for a variance from the ordinance provisions.
3. The Board of Adjustment sets a time for a public hearing and publishes a class 2 notice.
4. The Board of Adjustment holds a public hearing on the appeal.
5. The Board of Adjustment votes on the appeal.

6. EITHER: ↘

The variance is approved as the proposed activity does not violate the intent of the ordinance. The specific criteria is listed in the Board's written decision on the case.

THEN WHAT?

The Board directs the zoning administrator to issue a permit to the Doughs.

OR: ↘

The variance is denied.

THEN WHAT?

The Doughs may appeal to a court of record.

MEETING MINUTES - Plum County Planning and Zoning Committee

The following is an excerpt from the "minutes" of the fictitious December 5th meeting of the Plum County Planning and Zoning Committee. The excerpt concerns a hearing on a proposed amendment, and describes the kinds of issues, arguments and decision which may be faced by the Committee during a typical meeting.

Zoning Map Amendment

Petition by Mr. Willy Provit to remove the Flood Fringe district classification from one-half acre of his property.

Mr. Provit described his proposal, explaining that he had filled this property to the regional flood protection elevation and would now like to build a home on the land. He explained that he had followed proper procedures before filling his property by securing the necessary easements, DNR approval and all required permits. Before he constructs his home, he wants the Planning and Zoning Committee to amend the zoning map and remove the Flood Fringe designation from his land. This will relieve him of he need to floodproof his home.

Commissioner Birch asked the zoning administrator, Mr. Doright, if the amendment proposal was reviewed by the Department of Natural Resources. Mr. Doright reported that the proposal was reviewed, and that the DNR stated the map amendment was necessary since the original fill project increased the height of the regional flood level by 0.15 foot. The DNR approved the map amendment proposal as submitted, since all flooding easements and other appropriate legal procedures were properly accomplished. Any changes to the original proposal would require an additional review and approval by the DNR before the amendment can become effective.

Commissioner Birch noted that the fill project met the specifications of the floodplain ordinance by being above the flood protection elevation, and contiguous to land outside of the floodplain.

Chairman Bigcheese asked for statements in support of the amendment proposal. There being none, the Chairman asked for statements in opposition to the proposal. Mr. I.M. Crabby, a long time Plum County resident, appeared in opposition to the rezoning. He claimed that Mr. Provit's plans to build a house would encourage other residential development in the neighborhood, which would "bring in more kids and dogs to trample my flowers." Chairman Bigcheese reminded Mr. Crabby that the development itself is not contestable, since the area is zoned Residential. The Flood Fringe District simply overlaps the Residential District.

No further testimony was heard. The Planning Department recommended approval of the rezoning, as all criteria in the floodplain ordinance was met. Chairman Bigcheese reminded Mr. Provit that even though the Plum County Floodplain Ordinance will be amended, the maps used by local lending institutions will still consider his property in a flood hazard zone, for insurance purposes. If he builds any part of his home below the regional flood protection elevation, he will pay higher flood insurance premiums. Chairman Bigcheese advised Mr. Provit to talk to his insurance agent and lender about the matter.



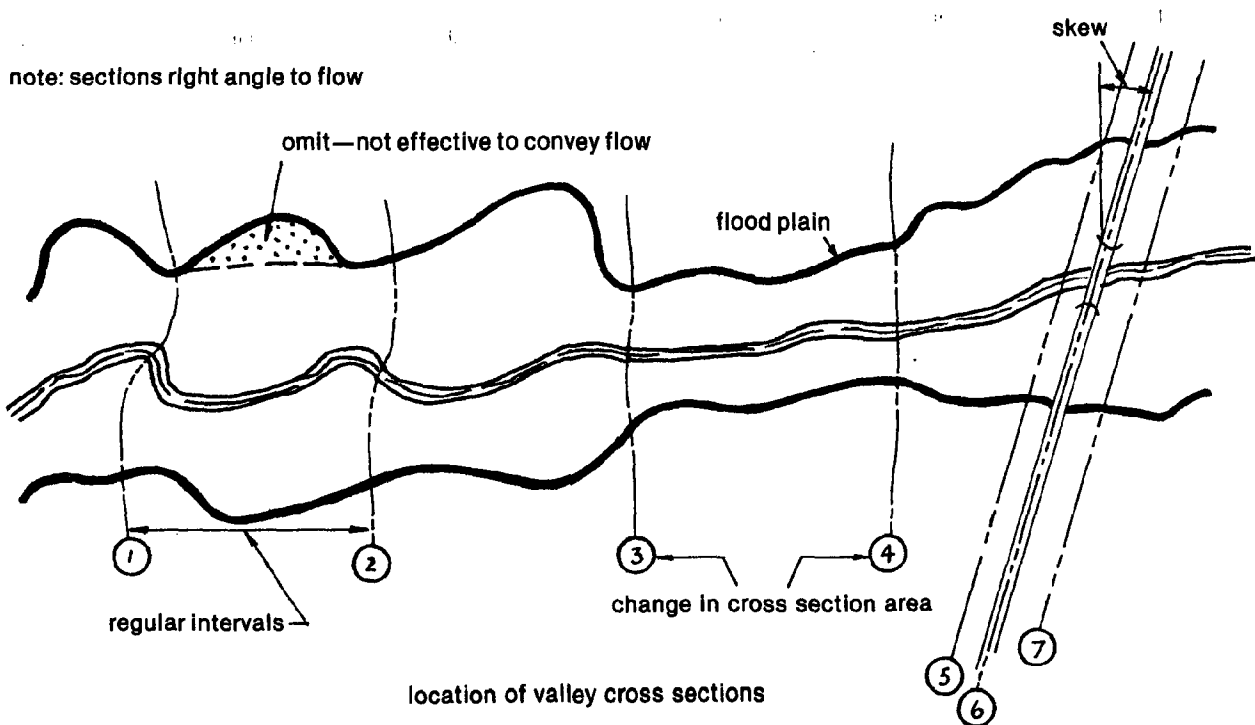
# Field Data Needed for Floodplain Determination

The following data must be supplied by a permit applicant and submitted to the zoning administrator for his or her use in determining the effect of the proposed activity on future flood heights.

## 1. Valley Cross Section

The valley cross section of the channel and overbank area must be taken perpendicular to the flow of the stream. The cross section must extend to an elevation above the expected floodplain. This elevation could vary from 5 to 25 feet above normal water elevations depending on the characteristics of the watershed.

It is important that the cross section be representative of the hydraulic reach of the stream affected by the proposed project. This may mean taking the typical cross section some distance away from the project site. Field notes must document the respective location of the cross section in relation to the project site.



## 2. Stream Slope Information

Water surface elevations should be taken at the project site, and at points, 1,000 feet upstream and downstream from the site to obtain average stream slope information. The elevations must be obtained during non-flooding conditions. If there is a bridge, culvert, dam or abrupt change in

channel slope within the 1,000 feet upstream or downstream of the project, then additional measurements must be taken immediately upstream and downstream of the control point.

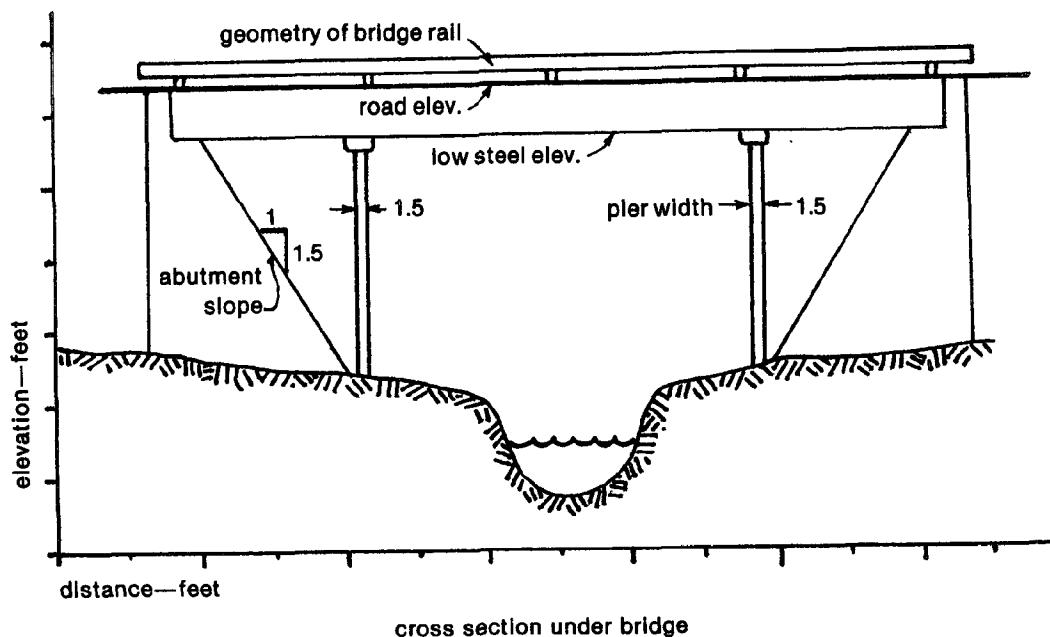
### 3. Photographs

Photos must be taken along the stream showing the channel, and ground cover in the overbank areas. The photos will be used to select an appropriate roughness coefficient (Mannings "n") for the stream reach.

### 4. Bridge Data

In cases where a bridge is the controlling factor in an analysis and the backwater effect from the bridge must be computed, the following data is necessary:

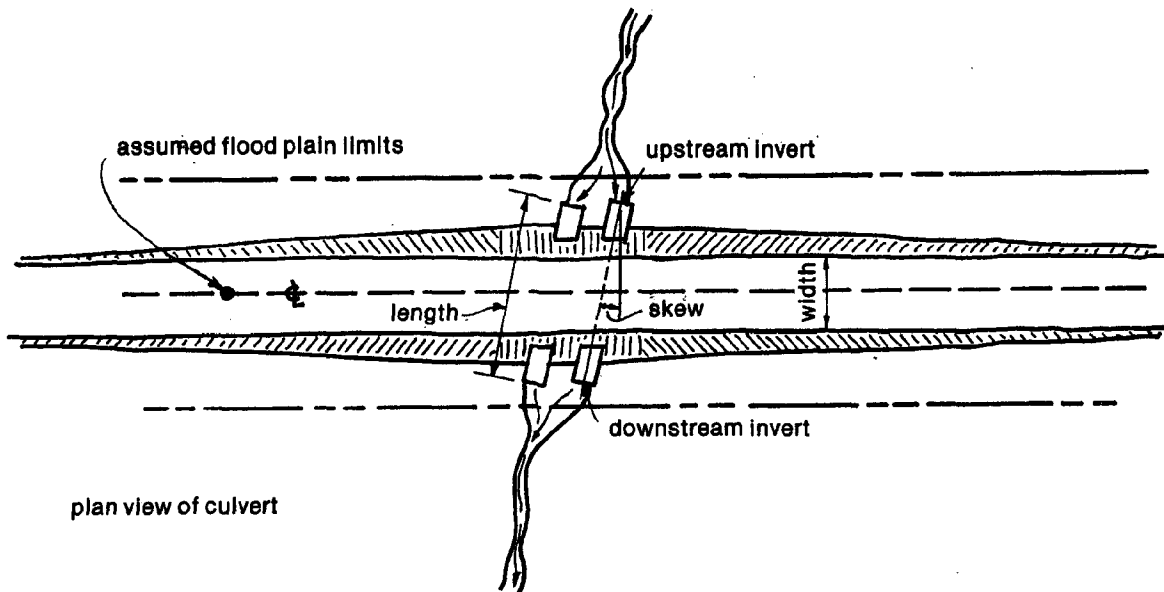
- a. representative valley cross section
- b. cross section along the centerline of the bridge to the assumed floodplain limits
- c. roadway elevation, road width, and type of surface
- d. cross section of the bridge opening showing the low steel elevation, bridge abutments, piers, and channel
- e. number, size and type of piers
- f. skew (the angle between the centerline of the bridge and a line drawn perpendicular to the channel flow)
- g. size of bridge opening
- h. description of bridge railings
- i. photographs of the bridge opening, channel, overbanks, right and left roadway approaches, and the top of the roadway.



## 5. Culvert Data

In cases where a culvert is the controlling factor in an analysis and the backwater effect must be computed, the following data is necessary.

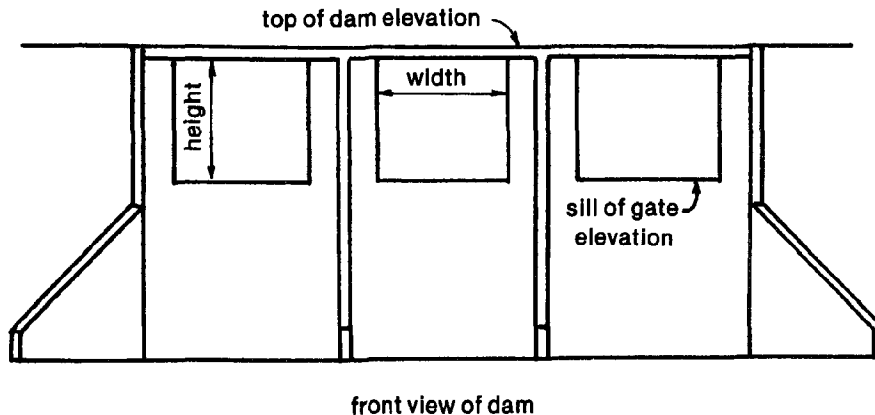
- a. representative valley cross section
- b. cross section along the centerline of the road to the assumed floodplain limits.
- c. road width
- d. type of surface
- e. number of culverts
- f. type and size of culverts
- g. length of culverts
- h. elevations of upstream and downstream inverts
- i. skew (the angle between the centerline of the culvert and a line drawn perpendicular to the flow)
- j. inlet type (e.g. headwall, projecting, mitered)



## 6. Dam Data

In cases where a dam is the controlling factor in an analysis and the backwater from the dam must be computed, the following data is necessary:

- a. type of gates
- b. size and number of gates
- c. elevations of top of dam, and sill of gates (and/or spillway)
- d. surface area reservoir
- e. representative cross-section to determine tailwater effects
- f. operating plan for the dam (if any)



## 7. Plan View

A plan view must be furnished when fill or excavation is to be analyzed in a floodplain. The plan view must show the exact dimensions and location of the proposed change in relation to the stream and other physical and geographic features. The geometry of the proposed fill or excavation should also be shown on the valley cross section so that the equal degree of hydraulic encroachment can be calculated for the opposite side of the stream.

### Collecting Field Data

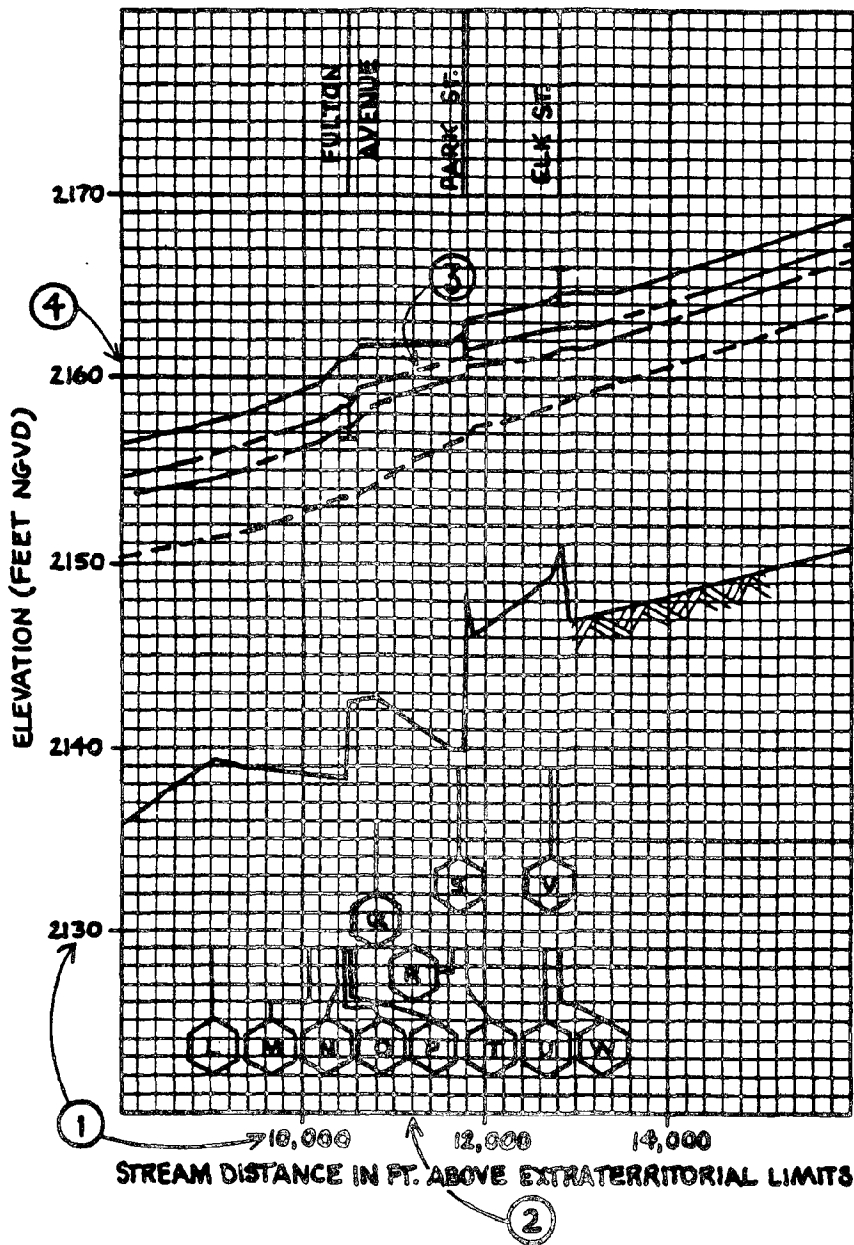
When collecting field data for use in calculating the water surface profile of a river or stream, many engineering judgements and field considerations must be applied. While performing the surveys it is important to remember that a cross section should be typical of the reach between the adjacent upstream and downstream cross sections. Local irregularities in the ground surface that are not typical of the reach should be avoided in the field survey.

Control structures such as roadgrades, bridges, culverts, levees, dams and wing dams should be shown on the cross section so they can be reflected in the hydraulic computation. Besides the measurements and descriptions noted in the field surveys, photographs should be taken of the control structure to facilitate the in-house analysis.

The reach length (distance between sections) must be measured in the channel and the right and left overbanks. Flood flows in stream overbanks often do not follow the meandering pattern of the channel, but take a general course through the floodway. This is particularly true for streams where a large percentage of the flood flows is conveyed in the overbanks. Under these circumstances, overbank cross sections should be measured at an average distance to describe the general floodway pattern of that overbank area.

Desirable maximum distances between cross sections differ from stream to stream. On large rivers that have average slopes of one foot per mile or less, cross sections along fairly uniform reaches may be taken at intervals of a half mile or more. On small tributaries that have very steep slopes, cross sections should be taken at intervals of 1,000 feet or less. When evaluating floodplain developments and encroachments, it is recommended that the maximum distance between cross sections be between 500-1,000 feet for rural areas, and about 500 feet in urban areas or where development is imminent.

In addition to obtaining field data within the limits of the study area, it is essential that data be gathered for a significant distance downstream. This distance varies from approximately one mile for steep sloped streams to one half mile for flat streams, and must include at least three cross sections.



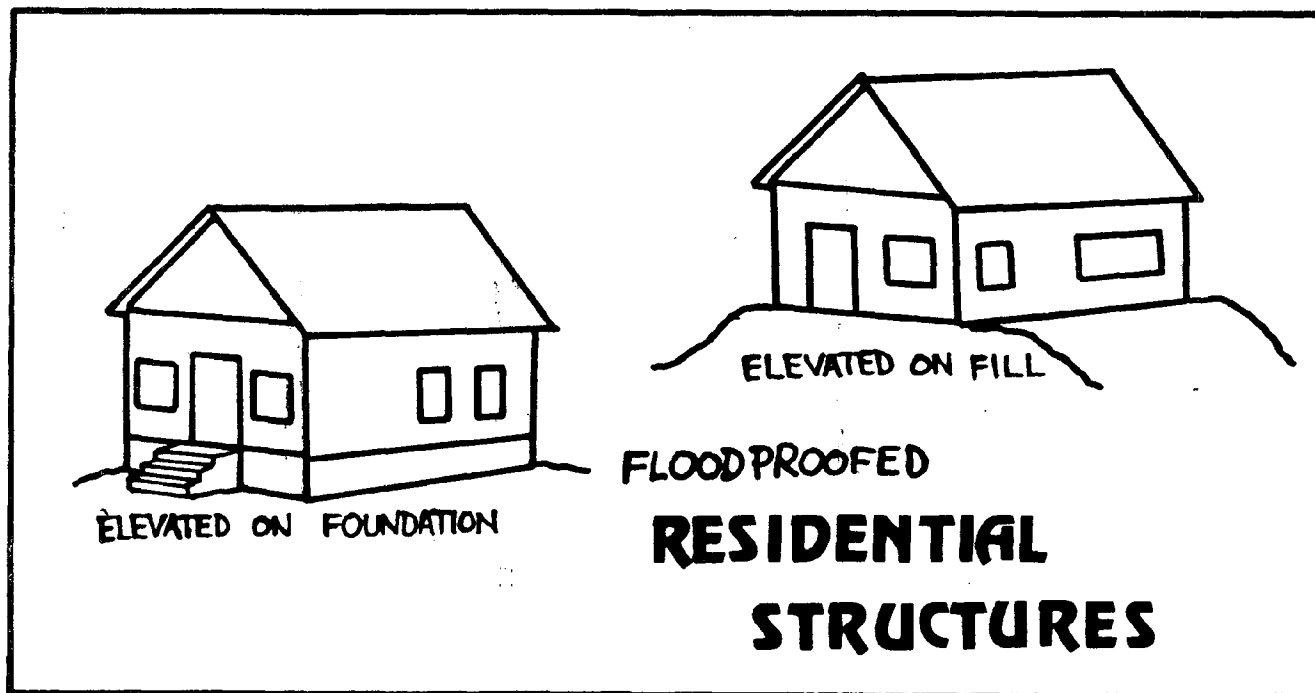
LEGEND	
	500-YEAR FLOOD
	100-YEAR FLOOD
	50-YEAR FLOOD
	10-YEAR FLOOD
	STREAMBED
	CROSS SECTION LOCATION

A FLOOD PROFILE IS A CHART WHICH SHOWS THE ELEVATION OF THE WATER SURFACE DURING A FLOOD EVENT AT PARTICULAR LOCATIONS ALONG A RIVER OR STREAM. FLOOD INSURANCE STUDIES DETERMINE THE ELEVATION AT THE CROSS SECTION MARKS FOR THE 10, 50, 100 AND 500 YEAR EVENTS. THE CROSS SECTION LOCATIONS CAN BE MORE EASILY SEEN ON A FLOOD BOUNDARY FLOODWAY MAP (FB FWM).

## READING A FLOOD PROFILE

1. First, check the scale. On the example above, each line on the horizontal axis represents 200 feet along the stream. The vertical axis lines represent one foot elevation above sea level.
2. Next, locate the point of concern on the horizontal axis. On the example, the point of concern is about 700 feet upstream from the Fulton Ave. Bridge.
3. Now, locate the point of concern on the line of the flood event you are interested in. The example shows this point on the 100 year flood line.
4. Finally, to determine the elevation, read the vertical line. At the point of concern, the 100 year elevation is 2160.4 FT MSL. The 10 year flood elevation is 2155.5 FT MSL.

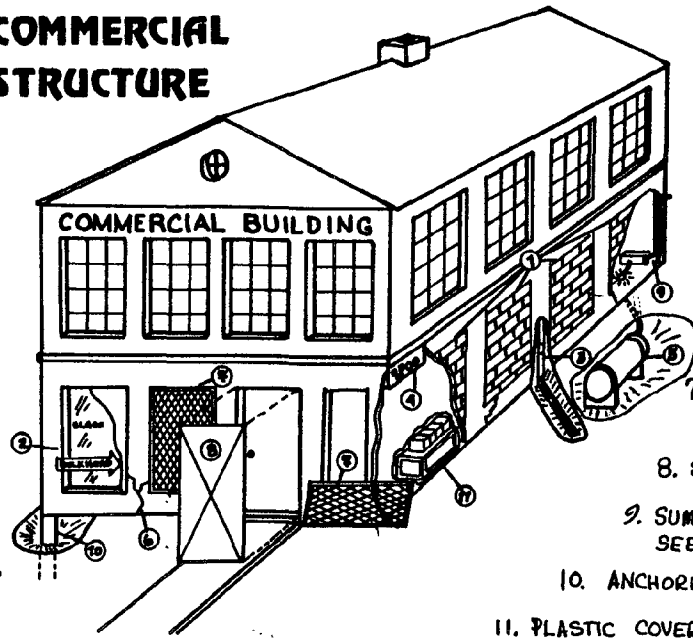
# Floodproofing



Floodproofing involves using any of a variety of techniques to lessen flood effects on a structure. A building may be elevated on fill, or a solid foundation.

While elevating the building is the surest flood proofing technique, structural floodproofing measures are being developed and improved. These techniques can be termed "wet" or "dry" floodproofing. Dry floodproofing keeps water from entering a building, whereas wet floodproofing measures allow water to enter the building, inflicting as little damage as possible to the structure and contents. FEMA and State standards allow only dry floodproofing--that is watertight construction to protect new buildings to the flood protection elevation. The structure must be designed to prevent basement walls from collapsing, cracking, or seeping. The techniques must avert buckling floors and sewer backups. Dry floodproofing is expensive and risky because it causes tremendous pressures to be exerted on walls and foundations. Because floodproofing measures are so expensive, they are more commonly used for commercial and industrial structures.

## FLOODPROOFED COMMERCIAL STRUCTURE



1. PERMANENTLY CLOSED OPENINGS  
2. WALLS SEALED TO PREVENT SEEPAGE

3. SEWER LINE WITH VALVE CLOSURE

4. UTILITIES RAISED ABOVE BASE FLOOD LEVEL

5. UNDERGROUND STORAGE TANKS PROPERLY ANCHORED

6. CRACKS SEALED WITH HYDRAULIC CEMENT

7. SCREENS TO PROTECT WINDOWS FROM FLOATING DEBRIS

8. STEEL BULKHEADS FOR DOORS

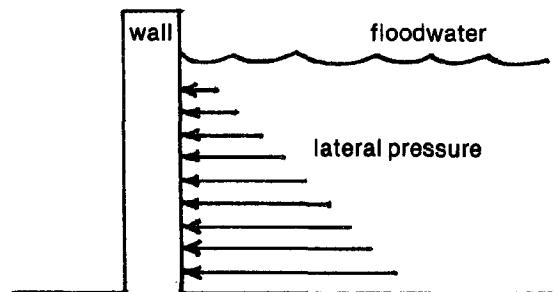
9. SUMP PUMP AND DRAIN TO EJECT SEEPAGE

10. ANCHORED FOUNDATION

11. PLASTIC COVERINGS FOR STORED MATERIALS

### Dry Floodproofing Measures

- reinforce walls
- drain subsurfaces
- anchor to prevent the building from "floating"
- seal walls with a commercial sealant
- close and seal openings



Water exerts the same pressure sideways as downward. So, as depth increases, the pressure at the bottom increases. The walls of most houses are not meant to withstand these pressures.



Floodproofing can be a useful tool in floodplain management and flood hazard mitigation. But before floodproofing measures are installed, the total objectives of the floodplain management program must be considered. A property owner needs to be aware of the potential risks involved with floodproofing. Flooding can be a dangerous situation and property owners should not be given a false sense of security, or floodproofing measures may lead to more disastrous results than if they had never been applied.

Floodproofing Certification Required

In choosing floodproofing measures, a property owner must consult with a contractor or engineer. The model floodplain ordinance requires floodproofing plans to be certified by a registered professional engineer or architect before a land use permit is issued. (Sec. 7.5) When construction is completed, another statement by a registered engineer or architect must verify that the floodproofing techniques were installed to protect the structure at least to the minimum flood protection elevation. A sample statement to be signed by a professional engineer is included below.

Sample Statement: Certification of Floodproofing

Zoning Administrator  
City County Building  
Our Town, Wisconsin

Dear \_\_\_\_\_:

This is to certify that I have examined the completed construction located \_\_\_\_\_ (street address \_\_\_\_\_ legal description) authorized by land use permit number \_\_\_\_\_. I certify that this structure has been designed and constructed in accordance with accepted engineering practices and that the structure is floodproofed at least to the minimum flood protection elevation of \_\_\_ ft. msl. This compares with the regional flood elevation of \_\_\_ ft. msl.

I attest to these figures by placing my engineers seal and my signature below.

SEAL

\_\_\_\_\_ John Doe, P.E. \_\_\_\_\_ Date

### Factors to Be Considered

In designing floodproofing techniques, an engineer must consider:

- The flood characteristics to be protected against -
  - How much warning will there be before a flood?
  - How long will the flood last?
  - How deep can the flood waters get?
  - Will there be fast currents, ice, or debris?
- The structure's integrity under those conditions -
  - How old is the building?
  - How will the soils act during a flood?
  - Are the walls and foundations capable of withstanding the predicted flood velocity and pressures?
  - Will the water flow through or around the building?
  - Are the utilities designed and located properly?

Again, we emphasize that floodproofing existing structures is just one part of a total floodplain management program. Flood insurance rates will not be reduced for floodproofed structures. Flood insurance rates are determined on the elevation of the lowest floor. (This includes the basement if one is present.) If the lowest floor is constructed below the flood protection elevation the insurance rates increase dramatically.

# Court Decisions and Legal Opinions

The local exercise of floodplain and shoreland zoning involves a series of legislative, administrative and quasi-judicial decisions. People aggrieved by these decisions may file appeals with the Board of Adjustment/Appeals. If the Board's decision is challenged, the circuit court may be petitioned to review the case. (Wisconsin's county court system was eliminated in 1978 and replaced by circuit courts.) The decisions of the circuit courts do not set precedent in other circuits. Other judges will often read these decisions and follow them, but their own decisions in similar cases may differ.

In Wisconsin the judgments of the circuit courts (trial courts) are subject to appeal at the Court of Appeals and Supreme Court levels. Published decisions of the higher courts have the effect of law; lower level courts are legally bound to follow their precedent.

The court system does not serve as an additional zoning body. Judges will generally not substitute their own opinions for that of governmental units, but instead will usually go to great lengths to uphold local administrative decisions. Judges often tell plaintiffs that the court is not the proper place for their complaint until all other forums are exhausted. While local discretionary decisions are not usually subject to judicial review, they can be if they overstep the boundaries of "arbitrary and capricious actions."

Wisconsin courts have allowed government bodies and officials to admit their mistakes. For example, when permits or plats are erroneously approved, the courts will allow the permits to be recalled or later rejected even if a property owner has begun construction.

Local ordinances are often clarified by the courts. The Wisconsin Supreme Court has proclaimed that in interpreting local zoning ordinances:

- as long as the language is clear and unambiguous, the ordinance "shall be liberally construed in favor of the county" (s. 59.97(13)).
- where language is ambiguous, the ordinance will be construed in favor of the landowner and his free use of private property.

Without proceeding to the courts, local governments and State agencies may seek answers to their zoning questions by asking for an "Opinion of the Attorney General." However, the decisions rendered by the State's Attorney General are not binding upon the local government or the courts. They constitute persuasive authority only.

The Department of Natural Resources often makes policy decisions on the basis of legal opinions offered by the DNR's Bureau of Legal Services. These opinions do not have any precedent value. They are not binding on local governments or other State agencies. They merely serve to inform others of the DNR's interpretation of various laws.

Local zoning officials are subject to liability suits for their actions in the performance of their jobs. Claims made against municipal governments and their employees are subject to the stipulations set forth in Section 895.43(1), Wisconsin Statutes.

### The Big Question: The Taking Issue

Floodplain and wetland-conservancy zoning are based upon exercising "police" power: the power to regulate to prevent public harm. When a government seeks to secure public benefits it must exercise the power of eminent domain. For example, to obtain the land necessary to build a freeway (thus conferring a benefit on the public), the government must pay the property owners for what it takes. But under the concept of police power, it is not necessary to pay a landowner. When we prohibit someone from living in a floodway, we are not only preventing harm to his life and property, but harm to others he may injure. Therefore, the courts have stated that floodplain zoning is usually an exercise of police power, not eminent domain, and does not constitute a taking.

In 1972 the Wisconsin Supreme Court decided a landmark case--Just v. Marinette County. The Just case verified the constitutionality of shoreland zoning. (See the reference to this case in the following section.) This important question regarding the constitutionality of floodplain zoning has not been passed upon by the Wisconsin courts, but preventing public harm is more readily applied to floodplain than shoreland zoning. We would, therefore, assume Wisconsin courts would uphold the veracity of floodplain zoning constitutionality. While the following zoning case decisions do not bind Wisconsin courts, we do feel they are of significance.

#### Agins v. City of Tiburon (California, 1980)

The U.S. Supreme Court upheld the City's right to restrict development density. These regulations did not impose a taking because legitimate State interests were advanced by the open space zoning ordinance.

#### Pope v. City of Atlanta (Georgia, 1978)

The City issued a stop-work order on Mr. Pope's tennis court project within a floodplain of the Chattahoochee River. The Supreme Court of Georgia found that the regulation of clearing, grading and filling within the floodplain was a valid exercise of police power. When such actions alter surface water runoff and soil erosion patterns they may detrimentally alter flood characteristics and cause harm to the general public. Notably, the Court justified considering the cumulative effect of development rather than just an individual action.

#### Maple Leaf Investors v. State Department of Ecology (Washington 1977)

The Washington Supreme Court upheld the constitutionality of floodplain zoning and found it to be a valid exercise of police power. The court noted that the State did not take any action "that would increase the flow of water over the appellant's property nor did the State set aside any of the property for public use." Floodplain regulations protect not only persons living in the floodplain but people and their property upstream and downstream. Floodplain regulations prevent harm rather than secure benefits to all involved.

### Court Decisions

**Question:** Is a shoreland zoning ordinance which requires a conditional use permit for the placing of fill in wetland areas a constitutionally valid exercise of police power or a constructive taking of land without compensation?

**Answer:** The Wisconsin Supreme Court upheld the constitutionality of Marinette County's shoreland zoning ordinance. The county, consistent with State standards, required a permit to fill wetland areas. The court validated the county's exercise of police power where restrictions placed on property prevent a public harm rather than create a public benefit. By denying the Justs (the landowners) a permit, the status quo of the natural environment was maintained. This was in a legal sense, not a gain and so did not secure further public benefits, but did serve to uphold the State's public trust doctrine. The court ruled that "destroying the natural character of a swamp or wetland so as to make that location available for human habitation is (not) a reasonable use of that land (even) when the new use, although of a more economical value to the owner, causes a harm to the general public." This case resolved a seeming conflict between the public interest in stopping the despoilation of a natural resource and the owners' asserted right to use their property as they wished. Just v. Marinette County (56 Wis. 2d 7) (1972)

**Question:** Can the State grant local governments control over navigable waters?

**Answer:** The Supreme Court ruled that delegation of authority for navigable water to local units of government was not an abdication of the public trust doctrine. Rather, the court views local control within State defined standards as furthering the public trust. Menzer v. Elkhart Lake (51 Wis. 2d 70) (Date?)

**Question:** May a property owner be prosecuted for violating a zoning ordinance if he relied upon oral assurance of the building inspector that the proposed construction would be allowed?

**Answer:** Mr. Snyder obtained a building permit for an addition to his home. During the construction he also decided to add a porch. The town building inspector verbally okayed the porch, so Snyder's builder began construction. A neighbor complained about the inadequate sideyard setback. The lot's area was substandard so the setback has previously been reduced from 20' to about 13'. The new porch encroached seven to nine feet into the sideyard. The Board of Adjustment ordered construction of the porch to stop and for no building permit to be issued post facto.

The court first decided that "unnecessary hardship" and "practical difficulty" are synonymous terms. Other courts had applied unnecessary hardship to use variances and practical difficulty to area variances, but the Supreme Court stated, "the terms...are unsusceptible to precise definition and are often stated disjunctively in zoning enactments, the authorities generally recognize that there is no practical difference between them."

Snyder claimed that he suffered unnecessary hardship because: 1) the building inspector had "authorized" the porch; 2) he had a substandard lot and the porch could not be placed elsewhere; 3) the porch was almost completed; and 4) he needs the porch to house his growing family, to enjoy lake living and increase his property value. The Court ruled that these hardships were self-created.

The Court said that the appellant's reliance on the building inspector's assurance did not negate his responsibility to know the requirements of the zoning ordinance. Nor did the building inspector's unauthorized act negate the condition of the zoning ordinance. Snyder therefore had no basis for claiming the hardship was not self-created. Although Snyder's lot was substandard, its dimensions have already been compensated for in the proportionate method used for the offset requirement. The Courts generally do not recognize natural growth of a family or personal inconvenience as justification for a variance based upon unnecessary hardship or practical difficulty. "It is not the uniqueness of the plight of the owner, but uniqueness of the land causing the plight, which is the criterion," quoted the court.

The Supreme Court upheld the decision of the Waukesha County Board of Adjustment, recognizing that the administrative decision of the Board was not unreasonable or without a rational basis. Snyder also failed to demonstrate that his hardship was anything other than self-created. Snyder v. Waukesha County Board of Adjustment (74 Wis. 2d 468, 247 N.W. 2d 98) (1976)

Question: If a permit is erroneously issued, may it be rescinded when the mistake is realized? May it be revoked if work has already begun?

Answer: City officials erroneously issued an occupancy permit to Mr. Leavitt for an illegal nonconforming use. By the time the city discovered the mistake, Leavitt had invested a fair sum of money to adapt the building to his business. The Supreme Court declared that despite the city's mistake and the owner's investment, the city must enforce its ordinance. While the original occupancy permit was illegal, it was also potentially injurious to the public interest. The public benefit and welfare must first of all be served. City of Milwaukee v. Leavitt (31 Wis. 2d 72.) (1966)

Question: If proper administrative channels are not followed, can an otherwise justified permit be issued?

Answer: The City issued building permits in an area which had been replatted without a public hearing held. Burns sought the permits to be revoked. The court agreed that a hearing should have been held, but the applicants failed to show they suffered substantial damage due to the city's neglect. A permit cannot be denied simply because proper channels were not followed. If the permit would normally have been granted, after the procedural deficiencies have been corrected, the permit can be issued. Burns v. City of Madison (284 N.W.2d 631) (1966)

Question: May a community impose a temporary moratorium while developing a comprehensive zoning ordinance?

Answer: A trial court ruled a two-year building moratorium unconstitutional on the basis of equal-protection-of-the-law and due process clauses of the Fourteenth Amendment. The Supreme Court reversed the decision of a lower court and authorized interim zoning. In reversing the lower court's decision the Supreme Court's reversal recognized that comprehensive planning and zoning require much study and time. When property owners know zoning changes are pending, they may precipitate action which would tend to frustrate the intent of the prospective ordinance. Therefore, the Court sees no objection to interim zoning when properly authorized by statute. Walworth County v. City of Elkhorn (27 Wis. (2d) 30.) (1965)

Question: What criteria must a court use in reviewing the decisions of a Board of Adjustment?

Answer: In a case before a circuit court under a writ of certiorari, the court's review is limited to:

"(1) Whether the Board kept within its jurisdiction; (2) whether it proceeded on correct theory of law; (3) whether its action was arbitrary, oppressive, or unreasonable and represented its will and not its judgment; and (4) whether the evidence was such that it might reasonably make the order or determination in question."

"...the findings of the Board may not be disturbed if any reasonable view of the evidence sustains them .... The court may not substitute its discretion for that committed to the Board by the legislature." Snyder v. Waukesha County Zoning Board (74 Wis. 2d 468, 247 N.W. 2d 98) (1976)

Question: May a property owner challenge as unconstitutional the method of administering and applying an apparently constitutional city zoning ordinance by a declaratory judgment action in the circuit court without first appeal to the city's zoning Board of Appeals?

Answer: No. Section 62.23(7)(e), Wisconsin Statutes sets forth a procedure for reviewing administrative actions. A trial court will not review the decision without it first being submitted to the Board of Appeals. Modell Investment Corp. v. City of Glendale, 78 Wis. 2d 416, 254 N.W. 2d 310 (1977). Judicial review will be denied until administrative remedies have been exhausted.

Question: When and how is a county required to give notice to the Department of Natural Resources of a proposed amendment to the county's shoreland zoning ordinance?

Answer: A county is required to give notice to the DNR when the notice requirements in Chapter NR 115, Wis. Adm. Code, are applicable. This applies even in a situation where the county shoreland ordinance does not expressly require notice to the DNR, since administrative rules have the effect of law. To satisfy the notice requirements of NR 115, the DNR must be given specific notice. The publication of a notice in a local newspaper can not reasonably be expected to give the DNR sufficient notice. Kline et al. v. Oneida County Planning and Zoning Committee, Case No. 81-325, an unpublished opinion of the Court of Appeals, District III. (1981)

#### Opinions of the Attorney General

Question: May a Board of Adjustment grant more than one variance if more than one variance is necessary to allow a structure on a particular lot?

Answer: Yes. The Attorney General interprets "variance" as used in Sec. 59.99(7)(c) Wisconsin Statutes, to include the plural as well as the singular form. The validity of the variances depends not on their number, but on whether the standards established by Sec. 59.97(7)(c) are met, especially the "unnecessary hardship" requirements. (69 OAG 146, 147; 1980)

Question: May a Board grant a variance to allow placement of a substandard mobile home on a parcel where the only hardship is that the applicant owned a substandard unit?

Answer: No. Inconvenience alone is insufficient to warrant a variance. The Attorney General quotes from Snyder v. Waukesha County Board of Adjustment, which points out that "practical difficulties or unnecessary hardship do not include conditions personal to the



owner of the land, but rather to the conditions affecting the lot in question. It is not the uniqueness of the plight of the owner, but uniqueness of the land causing the plight, which is the criterion." (69 OAG 146, 148-149; 1980)

**Question:** Can the Board of Adjustment hear appeals of rezoning decisions of the Planning and Zoning Committee?

**Answer:** No. Sections 59.99(4) and 62.23(7)(e)(4) authorize the Board to hear appeals from decisions of "administrative officers." The Planning and Zoning Committee holds hearings and makes recommendations concerning rezoning. But these recommendations do not constitute "decisions" under section 59.99(4). The actual decisions on rezoning are legislative decisions made by the governing body, not the zoning committee. (69 OAG 146, 149-152; 1980))

**Question:** Can the Board of Adjustment hear appeals on conditional use decisions rendered by the Planning and Zoning Committee?

**Answer:** Yes. Although there is no statutory requirement or right to appeal a Planning and Zoning Committee decision to the Board of Adjustment, a county may create such an appeal procedure in its local ordinance.

**Question:** Can towns adopt shoreland zoning regulations similar to those enforced by counties?

**Answer:** Yes. Towns exercising village powers can zone shorelands concurrently with counties, provided that the town ordinance is in conformance with, or more restrictive than the county shoreland zoning ordinance. A town exercising village powers must put its proposed shoreland zoning ordinance to a referendum and subject the ordinance to County Board approval. (65 OAG 108; 1976)

**Question:** May a town and county exercise concurrent jurisdiction over shoreland areas?

**Answer:** Yes. If the town exercises village powers and enacts a comparable or more restrictive shoreland ordinance, the town and county may both assume jurisdiction. To administer their ordinances, both the county and town must appoint a zoning administrator, a Planning and Zoning Committee and Board of Adjustment/Appeals. An individual seeking a permit or variance must then obtain approval through both town and county channels. (65 OAG 108, 111-112; 1976)

**Question:** Do the extraterritorial zoning powers of cities and villages supersede county shoreland zoning?

Question: May a property owner challenge as unconstitutional the method of administering and applying an apparently constitutional city zoning ordinance by a declaratory judgment action in the circuit court without first appeal to the city's zoning Board of Appeals?

Answer: No. Section 62.23(7)(e), Wisconsin Statutes sets forth a procedure for reviewing administrative actions. A trial court will not review the decision without it first being submitted to the Board of Appeals. Nodell Investment Corp. v. City of Glendale, 78 Wis. 2d 416, 254 N.W. 2d 310 (1977). Judicial review will be denied until administrative remedies have been exhausted.

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Question: May a Board grant a variance to allow placement of a substandard mobile home on a parcel where the only hardship is that the applicant owned a substandard unit?

Answer: No. Inconvenience alone is insufficient to warrant a variance. The Attorney General quotes from Snyder v. Waukesha County Board of Adjustment, which points out that "practical difficulties or unnecessary hardship do not include conditions personal to the

Answer: Yes. County zoning committees that are empowered to consider applications for special exceptions must give public notice and hold a public hearing before granting or denying special exceptions in order to meet the requirements of procedural due process, even though it is unclear whether Section 59.99, Wisconsin Statutes, requires notice and a public hearing in this situation. (Opinion No. 79-2A)

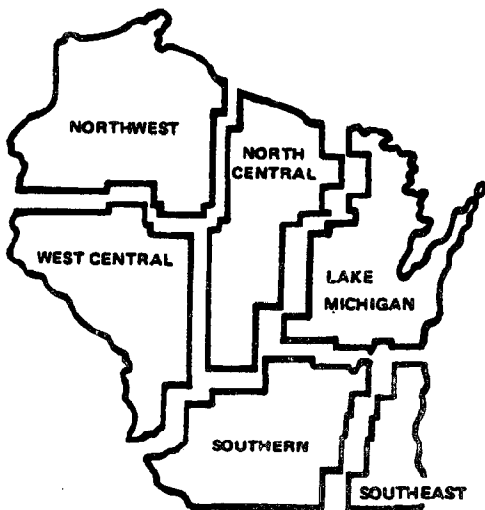
NOTE: If zoning ordinances do not contain a provision requiring a public hearing before special exception (conditional use) permits are acted upon by the zoning committee, steps should immediately be taken to amend the ordinance to include such provisions. Notice of a public hearing should be published as a Class 2 notice pursuant to Chapter 985, Wisconsin Statutes. In the future, the DNR will require the inclusion of such provision in shoreland and floodplain ordinances before approval is granted pursuant to Sections 59.971 and 87.30, Wisconsin Statutes. (Opinion No. 79-2)

Question: Are county governmental agencies such as the county park or highway department obligated to meet the requirements of county shoreland zoning ordinances?

Answer: Yes. County agencies are required by Sections 144.26 and 59.971, Wisconsin Statutes, to comply with county shoreland zoning ordinances although those ordinances may treat county government facilities separately (for example as special exceptions or conditional uses in certain districts). The criteria used to determine whether one local government must comply with the regulations of another local government has no application where local compliance with a State statute is required. (Opinion No. 79-10)

# WHERE TO GO FOR HELP

Communities can receive assistance and guidance for their floodplain and shoreland management programs. If you have questions or problems, do not hesitate to ask for help. Your first source of information is the Area or District office of the DNR which serves your community. The following map and phone numbers will help guide you to the appropriate office.



## DNR District and Area Offices:

<b>Northwest/Spooner</b> (715)635-2101 <b>Area Offices:</b> Spooner (715)635-2101 Cumberland (715)822-3590 Park Falls (715)762-4414 Brule (715)372-4866	<b>North Central/Rhineland</b> (715)362-7616 <b>Area Offices:</b> Rhineland (715)362-7616 Wisc. Rapids (715)423-5670 Antigo (715)627-4317 Woodruff (715)356-5211
<b>West Central/Eau Claire</b> (715)836-2928 <b>Area Offices:</b> Eau Claire (715)836-2047 La Crosse (608)785-9000	<b>Lake Michigan/Green Bay</b> (414)497-4040 <b>Area Offices:</b> Green Bay (414)497-4369 Oshkosh (414)424-4003 Marinette (715)732-0101
<b>Southern/Madison</b> (608)266-2628 (608)266-8859 <b>Area Offices:</b> Nevin (608)267-7718 Dodgeville (608)935-3368	<b>Southeast/Milwaukee</b> (414)257-6543 (414)257-8950

For information about the National Flood Insurance Program, call or write:

FEDERAL EMERGENCY MANAGEMENT AGENCY  
 300 South Wacker Drive  
 24th Floor  
 Chicago, IL 60606 800-638-6620

Assistance may also be available to you from your regional planning commission. Check these local resources out and jot down a name and phone number here.

Finally, other State and Federal agencies may be able to provide you with direct technical assistance in floodplain and shoreland management. They include:

## FEDERAL AGENCIES

U.S. Soil Conservation Service  
4601 Hammersley Road  
Madison, WI 53711  
(608) 264-5341

U.S. Geological Survey  
1815 University Avenue  
Madison, WI 53706  
(608) 262-2488

U.S. Army Corps of Engineers  
St. Paul District  
1135 U.S. Post Office & Custom House  
180 East Kellogg Blvd.  
St. Paul, MN 55101  
(612) 725-7501

U.S. Army Corps of Engineers  
Rock Island District  
Clock Tower Building  
Rock Island, IL 61201  
(309) 788-6361

U.S. Army Corps of Engineers  
Detroit District  
P. O. Box 1027  
Detroit, MI 48231  
(313) 226-6413

## STATE AGENCIES

Wis. Geological & Natural History Survey  
1815 University Avenue  
Madison, WI 53706  
(608) 262-1705

University of Wisconsin-Extension  
Dept. of Governmental Affairs  
Room 624, Lowell Hall  
University of Wisconsin  
Madison, WI 53706  
(608) 262-3584

Wis. Dept. of Industry, Labor and  
Human Relations  
P. O. Box 7969  
Madison, WI 53707  
(608) 266-3151

Wis. Division of Emergency Gov't.  
4802 Sheboygan Avenue  
Madison, WI 53707  
(608) 266-3232

# Bibliography

## BROCHURES

- Federal Emergency Management Agency Publications:
  - How to Read a Flood Hazard Boundary Map
  - How to Read a Flood Insurance Rate Map
  - Bridge Over Troubled Waters - The National Flood Insurance Program
  - Questions and Answers - National Flood Insurance Program
  - Flood: Are You Protected from the Next Disaster in the Event of a Flood?
  - In the Event of a Flood: Suggestions to Help Minimize the Loss of Life and Property
- Wisconsin DNR Publications:
  - Floodplain and Shoreland Mapping Grants
  - Floods Affect Your Property
  - A Helping Hand With Floodplain Management
  - Watch Out for Substandard Property!
  - Suggestions for Prospective Buyers of Waterfront Property in Rural Wisconsin
  - What You May Need to Know About Owning Shore Property
  - Mapping Wisconsin's Wetlands
  - Protecting Wetlands in Shoreland Areas

Most brochures are available at your Area or District DNR office.

- U.S. Army Corps of Engineers Publications:
  - Floodplain - Handle With Care!
  - Guidelines for Reducing Flood Damages
  - Shoreline Erosion

## MOVIES AND SLIDES

- Available from the DNR Bureau of Water Regulation and Zoning, GEF II, Box 7921, Madison, WI 53707:

Cry of the Marsh. Color, sound, 13 minutes.

A vivid portrayal of bird, animal, and plant life in an unspoiled marsh and the effects on nature of developing the marsh. A film with a conservation message.

What's Happening to Our Lakeshores? Color, sound, 27 minutes.

A documentary of what's happening to Wisconsin's lakes and lakeshores. Of special interest to community organizations.

Shoreland Development: A New Approach. Color, sound, 18 minutes.

Suggests ways to design development while protecting water quality and shoreline aesthetics.

What Can We Do About Floods? Color, sound, 25 minutes.

Produced by UW-Extension in 1959. Despite age of the film, contains good information, highly relevant to Wisconsin floods.

Untamed Earth. Color, sound, 18 minutes.

Produced by the Federal Insurance Administration. Footage of 1972 "Year of the Floods" disasters. Mayor of Rapid City, South Dakota, emphasizes responsibility of local officials in protecting their communities against flood damages.

It Doesn't Have to Happen. Color, sound, 22 minutes.

Produced in 1980 by the U.S. Army Corps of Engineers in cooperation with Minnesota and Wisconsin DNRs. Treats floodproofing and relocating floodway lines.

- Available from National Weather Service, North Central Flood Forecast Center, 6301 34th Ave. South, Minneapolis, MN 55450:

Watch Along the Watershed. Color, sound, 20 minutes.

Illustrates floodwarning system for the Susquehanna River in Pennsylvania. Efforts were initiated by private industry and extended by civil defense and county units.

- Available from the U.S. Army Corps of Engineers, St. Paul District, 1135 U.S. Post Office and Custom House, St. Paul, MN 55101:

Rivers, Floods and People. Color, sound, 11 minutes.

Shows how flood-fighting can minimize flooding, but more importantly, how wise use of the floodplain can let it serve both man and its natural purpose. 1974.

Waiting for the Next One. Color, sound, 10 minutes.

Depicts the 1979 Red River of the North flood.

Video-tapes (for 3/4 inch video cassette players)

"The 1979 Flood of the Red River," 25 minutes

"The 1979 Flood of Grand Forks-East Grand Forks," 25 minutes

"The 1978 Flood in Rochester," 10 minutes.

Slide-tape shows (for single projector, program slide show programmer, 1000 hertz tone)

"Urban Flooding" (Grand Forks-East Grand Forks and Fargo-Moorhead areas)

"The Aftermath of Floods" (Red River of the North)

#### ● OTHER REFERENCES

- Floodplain Policy Guidance

"A Uniform National Program for Floodplain Management," U.S. Water Resources Council; 1976, revised 1979.

Executive Order 11988 (President Jimmy Carter) in Weekly Compilation of Presidential Documents 13(22): 803-805, May 30, 1977.

"Floodplain Management Guidelines for Implementing Executive Order 11988," U.S. Water Resources Council, 1978.

•Floodplain Engineering Documents

"A Uniform Technique for Determining Flood Flow Frequencies," Bulletin 17A, U.S. Water Resources Council, revised 1977.

"Generalization of Stream Flow Characteristics," U.S. Geological Survey, Water Supply Paper, 1975.

"Techniques for Estimating Magnitude and Frequency of Floods for Wisconsin Streams," Duane H. Conger, U.S. Geological Survey, Water Resources Investigations Report 80-1214, 1981.

"Urban Hydrology for Small Watersheds," U.S.D..A., S.C.S.-Engineering Division, Technical Release No. 55, 1975.

•Floodplain Management

"A Process for Community Floodplain Management," U.S. Department of the Interior, Office of Water Research and Technology; OWRT T/799, 1979.

"Community Assistance Services," U.S. Department of Housing and Urban Development, Federal Insurance Administration (Federal Emergency Management Agency), 1977.

- No. 1(d): Guide for ordinance development
- No. 2: Coordination during flood insurance studies
- No. 3: Entering the regular program
- No. 4: The floodway -- A guide for community permit officials.

"Flood Hazard Mitigation," National Science Foundation, 1980.

"Floodland and Shoreland Development Guide," South Eastern Wisconsin Regional Planning Commission, Planning Guide No. 5, 1968.

"Floodplain Management Handbook," U.S. Water Resources Council, 1981.

"Out of Harms Way: Lower Meramac Valley flood damage reduction study," Upper Mississippi River Basin Commission and the Missouri Department of Natural Resources, 1981.

"Physical and Economic Feasibility of Nonstructural Floodplain Management Measures," William K. Johnson, U.S. Army Corps of Engineers, 1978.



●Floodproofing

"Design Guidelines for Flood Damage Reduction," AIA Research Corporation for the Federal Emergency Management Agency, October 1981.

"Flood Proofing Regulations," U.S. Army Corps of Engineers, 1972.

"Introduction to Flood Proofing," John R. Sheaffes, U.S. Army Corps of Engineers, 1967.

"Protecting Your House from Flood Damage," Illinois Department of Transportation, Division of Water Resources, Local Assistance Series 3B, 1980.

●Shoreland and Wetland Management

"An Introduction to Wisconsin Wetlands - Plants, Hydrology and Soils," R.P. Novetzki, U.S. Geological Survey and UW-Extension - Wisconsin Geological and Natural History Survey, 1979.

"Historical Perspectives: Adoption of the 1967 Shoreland and Floodplain Zoning Law in Wisconsin," UW-Extension - Department of Governmental Affairs and Department of Urban and Regional Planning, 1978.

"Shoreland and Floodplain Zoning Along the Shore of Lake Michigan," O.R. Striegl, Wisconsin Department of Natural Resources, 1977.

"The Local Resource-Regulation Connection: A practical approach for incorporating a concept of resource carrying-capacity into local land use programs," Doug Yanggen and Bill Lontz, UW-Extension - Department of Governmental Affairs, 1980.

"Wisconsin Wetlands," Wisconsin Department of Natural Resources and the Wisconsin Board of Soil and Water Conservation, 1980.

●Local Governments and Zoning

American Law of Zoning, R.M. Anderson, Lawyers Cooperative Publishing Co., Rochester, New York, 1978.

"Floodplain Regulations," Jon Kusler, U.S. Army Corps of Engineers, EP 1165-2-304, 1979.

"Local Government in Wisconsin," State of Wisconsin Blue Book, pages 95-354, 1979-1980.

"Recent Court Cases," Lee Boushea and Richard Lehmann, prepared for the 1978 fall conference of the Wisconsin County Code Administrators by UW-Extension - Department of Governmental Affairs, 1978.

"Reviewing, Recommending and Regulating: A beginner's guide to plan commissions and zoning committees," UW-Extension - Department of Governmental Affairs, review draft, 1978.

The Law of Zoning and Planning, A.H. Rathkopf, Clark Boardman Co., New York, New York, 1956.

"Zoning Boards of Adjustment/Appeals: A guide for the newly appointed board member," UW-Extension - Department of Governmental Affairs, review draft, 1978.

"Zoning Law and Practice in Wisconsin," Richard Cutter, Wisconsin Property Law Series - Vol. I, The Institute of Continuing Legal Education, 1967.

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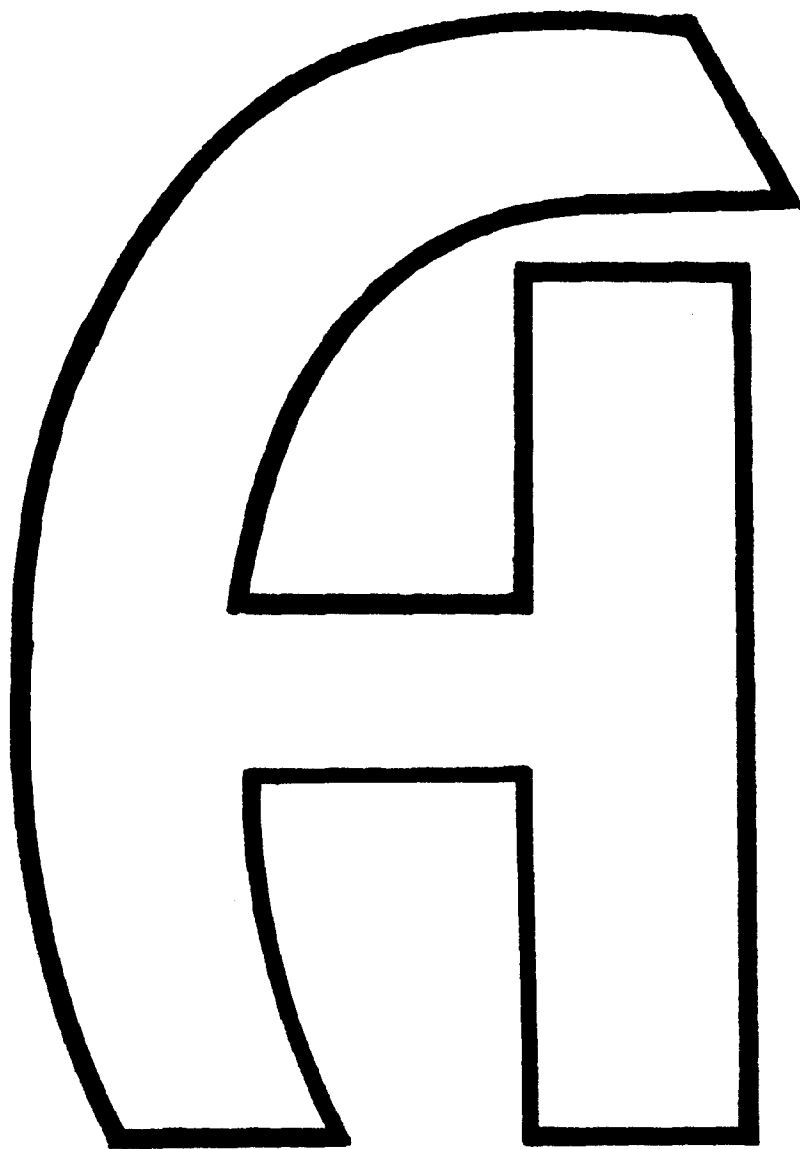
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**SAMPLE ZONING FORMS**

YOUR COUNTY

APPLICATION FOR PERMIT TO DEVELOP IN A FLOODPLAIN

PERMIT NO. FP \_\_\_\_\_

The undersigned hereby makes application for a permit to develop in a floodplain. The work to be performed, including flood protection works, is as described below and in attachments hereto. The undersigned agrees that all such work shall be done in accordance with the requirements of the County Floodplain Zoning Ordinance and with all other applicable County Ordinances and the laws and regulations of the State of Wisconsin.

LOCATION:

Number	Road	Town	Sec 1/4	1/4
Lot	Block	Subdivision or C.S.M. Number	Zone	

PROPOSED WORK:	BUILDING:	FLOOD DISTRICT:	AREA:
Subdivision	New	General FP	_____ x _____
Filling	Addition	Regional FP	Square feet _____
Grading	Alteration	Regional FW	RFE _____ USGS
Mineral removal	Moving		Top of fill _____ USGS
Dredging	Z.P. # _____	FIRM ZONE _____	Cost _____

Owner	CONTRACTOR/BUILDING
_____	_____
_____	_____
_____	_____

Signed: \_\_\_\_\_ (Owner/Agent) Date \_\_\_\_\_

Permit issued \_\_\_\_\_ Permit denied \_\_\_\_\_ Reason \_\_\_\_\_

Fee \$ \_\_\_\_\_ By: \_\_\_\_\_ Date \_\_\_\_\_

Inspection record:

By: \_\_\_\_\_ Date \_\_\_\_\_ C of C issued \_\_\_\_\_ By: \_\_\_\_\_

Plans prepared by \_\_\_\_\_ Date \_\_\_\_\_  
Land Surveyor/Engineer/Architect

Sent to DNR District \_\_\_\_\_ Main Office \_\_\_\_\_ By \_\_\_\_\_

Other information \_\_\_\_\_

NOTE: Property owners, builders and contractors are primarily responsible for code compliance and reasonable care in construction.

Town \_\_\_\_\_

APPLICATION FOR A  
WE-DO-RIGHT COUNTY ZONING **PERMIT**  
AND CERTIFICATE OF COMPLIANCE

Permit No. \_\_\_\_\_

Owner or Agent \_\_\_\_\_

Date \_\_\_\_\_

Address \_\_\_\_\_

Telephone Number \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Sanitary Permit Number \_\_\_\_\_

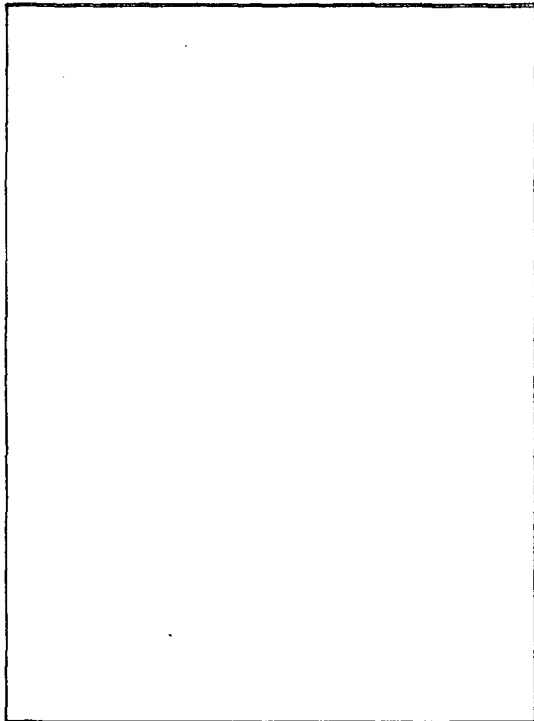
Zoning District \_\_\_\_\_

Road Name \_\_\_\_\_

Gov't Lot # \_\_\_\_\_, \_\_\_\_\_<sup>1</sup>/<sub>4</sub>, \_\_\_\_\_<sup>1</sup>/<sub>4</sub>, Section \_\_\_\_\_, T \_\_\_\_\_ N, R \_\_\_\_\_ E Area \_\_\_\_\_ Acres

Subdivision \_\_\_\_\_, Lot \_\_\_\_\_, Block \_\_\_\_\_, House # \_\_\_\_\_, Fire # \_\_\_\_\_

SKETCH PLAN:



SETBACKS:

Highway \_\_\_\_\_ ft. to centerline

Highway \_\_\_\_\_ ft. to right-of-way

Side Yard \_\_\_\_\_ ft.

Side Yard \_\_\_\_\_ ft.

Rear Yard \_\_\_\_\_ ft.

Water (river, stream, etc.) \_\_\_\_\_ ft.

Wetland \_\_\_\_\_ ft.

Septic Tank \_\_\_\_\_ ft.

Drainfield/Dry Well \_\_\_\_\_ ft.

Purpose of Construction: \_\_\_\_\_

Contractors:

Building \_\_\_\_\_

Plumbing \_\_\_\_\_

Electrical \_\_\_\_\_

Market Value \_\_\_\_\_

Completion Date \_\_\_\_\_

Dimensions of Proposed Construction/Square Ftg. \_\_\_\_\_

For Office Use:

Date Issued \_\_\_\_\_ Date Denied \_\_\_\_\_

(Deputy Zoning Administrator's Signature)

PROPERTY OWNER'S STATEMENT

The undersigned property owner hereby applies for a ZONING PERMIT and CERTIFICATE OF COMPLIANCE for the alteration described and located as shown herein and agrees that all work shall be done in accordance with the requirements of the joint TOWN-COUNTY ZONING ORDINANCE and the statements of this application and agrees that the premises will not be used until the (Deputy) Zoning Administrator, after notification, certifies such completed alteration is in compliance with the requirements of the joint TOWN-COUNTY ZONING ORDINANCE and the statements of this application.

NOTE: Property owners, builders and contractors are primarily responsible for code compliance and reasonable care in construction.

Signature of Property Owner or Agent \_\_\_\_\_

Date \_\_\_\_\_



WE-DO-RIGHT COUNTY  
OFFICE OF  
PLANNING & ZONING  
ADMINISTRATION

APPLICATION FOR SHORELAND SPECIAL EXCEPTION (CONDITIONAL USE) **PERMIT**

Owner \_\_\_\_\_ Date \_\_\_\_\_  
Mailing Address \_\_\_\_\_ Telephone \_\_\_\_\_  
Number \_\_\_\_\_

The undersigned hereby applies for a permit to do the work herein described, and as shown on the required Site Plan Form or attached registered survey hereof, and hereby agrees that all work will be done in accordance with all the laws of the State of Wisconsin and all of the ordinances of the County and Town applicable to the following described premises:

Subdivision Name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_  
Street or Highway \_\_\_\_\_ Zoning District \_\_\_\_\_  
Abutting Body of Water \_\_\_\_\_  
Section \_\_\_\_\_ Township \_\_\_\_\_ Range \_\_\_\_\_ Parcel No. \_\_\_\_\_

PROJECT SPECIFICATIONS

Type and Size of Materials to be used \_\_\_\_\_  
Dimensions and depth of area to be filled \_\_\_\_\_  
Amount of fill to be used \_\_\_\_\_  
Restoration methods to be used (include time table) \_\_\_\_\_  
Designed by \_\_\_\_\_ Contractor \_\_\_\_\_ Estimated Cost \_\_\_\_\_

IT IS THE RESPONSIBILITY OF ALL APPLICANTS TO COMPLY WITH THE FOLLOWING CONDITIONS

1. All projects constructed shall meet the conditions stipulated at the time the permit is approved. Furthermore, the project shall not cause the diversion of any storm water on to abutting properties or the road right-of-way.
2. All applicants are required to inquire and obtain any and all necessary permits from the U.S. Army Corps of Engineers, the Department of Natural Resources and the local Township. No work shall commence until all necessary permits have been obtained.
3. Each applicant for a Shoreland Special Exception (Conditional Use) Permit is charged with knowledge of the County Shoreland and Floodplain Zoning Ordinance. Copies of the text of this Ordinance or portions thereof and copies of the official Zoning Maps are available for sale, copying or inspection upon request. Any statement made, site plan submitted, any project improperly constructed, assurance given or permit erroneously issued contrary to this Ordinance is null and void and may be subject to prosecution.
4. The Planning and Zoning Committee of We-Do-Right County Board of Supervisors may establish conditions to guarantee the project is completed in conformance with County Ordinances, assuring against erosion, sedimentation and pollution.

Remarks \_\_\_\_\_

NOTE: Property owners, builders and contractors are primarily responsible for code compliance and reasonable care in construction.

I have applied for permits from the: Wis. Dept. of Natural Resources, Date \_\_\_\_\_  
U.S. Army Corps of Engineers, Date \_\_\_\_\_  
Fee Paid: Cash \_\_\_\_\_ Check \_\_\_\_\_ The undersigned hereby attests that the above stated  
Receipt Number \_\_\_\_\_ information is true and accurate.  
Planning & Zoning Committee Action: Owner \_\_\_\_\_  
Approved Denied Date \_\_\_\_\_ Agent \_\_\_\_\_  
(if representing owner)  
Date Permit Issued: \_\_\_\_\_ Agent's Address \_\_\_\_\_  
Planning & Zoning Administrator \_\_\_\_\_ Phone \_\_\_\_\_

SITE PLAN FORM  
APPLICATION FOR SHORELAND SPECIAL EXCEPTION (CONDITIONAL USE) **PERMIT**

As required by Section 4.1 of We-Do-Right County Shoreland Zoning Ordinance and Section H 62.20 of the Wisconsin Administrative Code, the following information is required and shall be drawn to scale:

1. Shape and dimensions of lot
2. Location, use and dimensions of all existing and proposed structures on lot
3. Setback distances from all lot lines and distances between structures. All street yard distances measured shall be measured from the edge of the highway right-of-way (property line)
4. Septic or holding tank seepage field, and well location and distance from lot line and building on lot
5. Amount and location of fill indicated by inches or feet over the area to be filled
6. Location of any proposed shore protection (indicate location of high-water mark)
7. Indicate type and size of materials to be used
8. Prior to completing this site plan, any applicant with any questions in regards to the requirements of this application should contact this office.

N

Scale used:

The undersigned hereby attests that the above site plan is an accurate representation of the property and all structures, areas to be filled, and shore protection to be installed thereon.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

THIS CERTIFIES THAT A

# ZONING PERMIT

Has been issued to \_\_\_\_\_

for \_\_\_\_\_ in \_\_\_\_\_  
(Type and use of building) (Mates and bounds or Lot block and Subdivision)

In \_\_\_ ¼ of \_\_\_ ¼ of Section \_\_\_\_\_ in Township \_\_\_\_\_ Range \_\_\_\_\_

on \_\_\_\_\_ Highway in \_\_\_\_\_ County

City/Village of \_\_\_\_\_  
(Zoning Administrator)

POST ON PREMISES IN PLAIN VIEW

NOTE: Print on durable cardboard

NOTICE IS HEREBY GIVEN THAT A

# VIOLATION

OF THE

\_\_\_\_\_ ORDINANCE

OF

\_\_\_\_\_ COUNTY/CITY/VILLAGE

MAY EXIST ON THESE PREMISES

WITH RESPECT TO:

- |  |  |
|--|--|
| <input type="checkbox"/> Land Use          | <input type="checkbox"/> Floodplain Building Elevation |
| <input type="checkbox"/> Building Location | <input type="checkbox"/> Other                         |

THE OWNER OF THIS PROPERTY IS ADVISED TO CONTACT  
THE OFFICE OF THE ZONING ADMINISTRATOR AT ONCE.

NOTE: Print in red on durable waterproof cardboard

We-Do-Right County, WI

Date

Mr. John Doe, Permit Applicant  
P. O. Box 000  
We-Do-Right, WI

RE: Denial of Development Permit No. \_\_\_\_\_

Dear Mr. Doe:

Your application for a permit to construct a ~~two-story~~ residential structure at 543 River Road is denied. The structure, as proposed, is in violation of the Floodplain Ordinance adopted by We-Do-Right County on \_\_\_\_\_ for the following reason(s):  
(Date)

1. Your plans show a lowest floor elevation of 882 FT M.S.L. The regional flood elevation at that site is 891 FT M.S.L. The Floodplain Ordinance requires that the lowest floor, including the basement, of all new structures be elevated at least two feet above the regional flood level.

If you wish to pursue this development project, you have three options:

1. You may redesign your project so it is in compliance with the Floodplain Ordinance, and resubmit your permit application;
2. If you feel I have made a mistake or misinterpreted the ordinance, you may appeal this decision to the Planning and Zoning Committee; or
3. If you feel you have a unique situation and the ordinance places an unfair hardship on you, you may request a variance from the Board of Adjustment.

Should you have any questions, please contact me.

Sincerely,

Zoning Administrator  
We-Do-Right County, WI

Office of the Zoning Administrator  
City/County Building  
Date \_\_\_\_\_

Dear \_\_\_\_\_:

As required under the \_\_\_\_\_ Ordinance, notice is hereby given that you are in violation of \_\_\_\_\_ (city specific ordinance provisions) of the \_\_\_\_\_ Ordinance.

The violations noted are \_\_\_\_\_

\_\_\_\_\_ and the following actions should be taken by \_\_\_\_\_ (date):

\_\_\_\_\_ The violation was first noted as having occurred on \_\_\_\_\_ (date) and any penalties provided for in \_\_\_\_\_ (cite specific ordinance section)

of the \_\_\_\_\_ Ordinance shall be applicable as of that date.

Please feel free to contact this office, for we are available to assist you in clarifying this matter.

Yours very truly,

\_\_\_\_\_  
Enforcing Officer

# COMPLAINT ON VIOLATION

## STATEMENT BY COMPLAINANT

On the basis of my understanding of \_\_\_\_\_  
(city specific ordinance provisions)  
of the \_\_\_\_\_ Ordinance, it is my belief that the property located  
at \_\_\_\_\_  
(address)  
and being used by \_\_\_\_\_ may be in violation of  
(name of alleged violator)  
the ordinance because:  
(insert reasons)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Complainant \_\_\_\_\_

Address \_\_\_\_\_

Date \_\_\_\_\_

Phone \_\_\_\_\_

## ACTION OF ENFORCING OFFICER

### A. Review of Complaint Filed, indicates

- no violation of provisions of \_\_\_\_\_ Ordinance  
 the following provisions of the \_\_\_\_\_ Ordinance may be  
in violation \_\_\_\_\_  
(cite specific ordinance provisions)

Comments: \_\_\_\_\_

### B. Inspection of Premises, indicates

- no violation of provisions of \_\_\_\_\_ Ordinance  
 violations noted of the following provisions of the \_\_\_\_\_  
Ordinance \_\_\_\_\_  
(city specific ordinance provisions)

Date(s) of Inspection \_\_\_\_\_

### Action on Complaint

- no action taken as no violation was found  
 action taken as follows:

Enforcing Officer \_\_\_\_\_

Date \_\_\_\_\_

Land Use Appl. No. \_\_\_\_\_  
Sanitary Appl. No. \_\_\_\_\_

Date \_\_\_\_\_

Owner \_\_\_\_\_

Lot \_\_\_\_\_

Block \_\_\_\_\_

Subdivision \_\_\_\_\_

Original owner must preserve this certificate.

No. \_\_\_\_\_

### CERTIFICATE OF COMPLIANCE

Premises located in \_\_\_\_\_<sup>1</sup>/<sub>4</sub>, \_\_\_\_\_<sup>1</sup>/<sub>4</sub>, Section  
T \_\_\_\_\_, R \_\_\_\_\_, Town of \_\_\_\_\_  
Lot \_\_\_\_\_, Block \_\_\_\_\_ Subdivision  
City/Village of \_\_\_\_\_

Date \_\_\_\_\_ 19 \_\_\_\_\_

Check One

Owner \_\_\_\_\_

New Bldg.

Address \_\_\_\_\_

Existing Bldg.

Use \_\_\_\_\_

Vacant Land

Zoning District \_\_\_\_\_

Compliance is hereby certified with the requirements of the Zoning Ordinance

Inspected by \_\_\_\_\_

Inspected by \_\_\_\_\_

Inspected by \_\_\_\_\_

Date \_\_\_\_\_

Date \_\_\_\_\_

Date \_\_\_\_\_

This certifies that the above described premises may be occupied and used in the manner above specified, and certifies that the above specified occupancy complies with the zoning ordinance of the County/City/Village of \_\_\_\_\_ and the laws of the State of Wisconsin.

Signed \_\_\_\_\_  
Zoning Administrator

**IT IS UNLAWFUL**

to occupy these premises except as above specified. If use is to be changed, a new certificate must first be secured.

Number \_\_\_\_\_

**APPEAL TO THE  
BOARD OF ADJUSTMENT/APPEALS**

**APPELLANT**

**AGENT FOR APPELLANT**

Name \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

Address \_\_\_\_\_

(city) (state) (zip)

(city) (state) (zip)

Telephone Number \_\_\_\_\_

Telephone Number \_\_\_\_\_

**APPEAL REQUEST (State briefly what is being appealed)**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**PROPERTY LOCATION AND DESCRIPTION**

Gov't Lot # \_\_\_\_\_, \_\_\_\_\_<sup>th</sup>, of the \_\_\_\_\_<sup>th</sup>, of Section \_\_\_\_\_, T \_\_\_\_\_ N, R \_\_\_\_\_ E

Town of \_\_\_\_\_, Area \_\_\_\_\_ Acres

Legal Description of Property \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date \_\_\_\_\_

(signature of appellant)

**DISPOSITION**

Date of Publishings: \_\_\_\_\_ and \_\_\_\_\_

Date of Appeal \_\_\_\_\_ Date of Hearing \_\_\_\_\_

Action Taken: Approve \_\_\_\_\_ Approve with Condition \_\_\_\_\_ Table \_\_\_\_\_ Deny \_\_\_\_\_

Date of Action \_\_\_\_\_



**VARIANCE (APPEAL)  
BOARD OF ADJUSTMENT/APPEALS**

(I) (WE) \_\_\_\_\_ hereby appeal to the  
Board of Adjustment for a variance on the following described land:

\_\_\_\_\_ in the Town of \_\_\_\_\_ which is located in the \_\_\_\_\_  
Zoning District.

The variance is required because \_\_\_\_\_ of the  
Zoning Ordinance requires that \_\_\_\_\_

Proposed use of property, building, addition or alteration if variance is granted \_\_\_\_\_

Reason/s why applicant cannot comply with ordinance requirements \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_  
Signed applicant or agent

\_\_\_\_\_  
Mailing address

**ACTION BY BOARD OF ADJUSTMENT/APPEALS**

FINDING OF FACT IS INCLUDED IN THE MINUTES OF THE PUBLIC HEARING OF \_\_\_\_\_

DIVISION: \_\_\_\_\_

Appeal No. # \_\_\_\_\_ Zoning Permit No. # \_\_\_\_\_ Issued: \_\_\_\_\_

\_\_\_\_\_  
Zoning Administrator

Number \_\_\_\_\_

**REQUEST TO THE CITY/COUNTY  
PLANNING AND ZONING COMMITTEE**

**APPELLANT**

**AGENT FOR APPELLANT**

Name \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_  
(city) (state) (zip)

\_\_\_\_\_  
(city) (state) (zip)

Telephone Number \_\_\_\_\_

Telephone Number \_\_\_\_\_

**REQUESTED CHANGE (State briefly what is being requested and why)**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**PROPERTY LOCATION AND DESCRIPTION**

Gov't Lot # \_\_\_\_\_, \_\_\_\_\_<sup>1</sup>/<sub>4</sub>, of the \_\_\_\_\_<sup>1</sup>/<sub>4</sub>, of Section \_\_\_\_\_, T \_\_\_\_\_ N, R \_\_\_\_\_ E,

Town of \_\_\_\_\_, Area \_\_\_\_\_ Acres

Legal Description of Property \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date \_\_\_\_\_  
(signature of appellant)

**DISPOSITION:**

Date of Publishing \_\_\_\_\_ and \_\_\_\_\_

Date of Request \_\_\_\_\_ Date of Hearing \_\_\_\_\_

Committee Action \_\_\_\_\_ Date of Action \_\_\_\_\_

County Board Action \_\_\_\_\_ Date of Action \_\_\_\_\_

PETITION NO. \_\_\_\_\_  
**PETITION** TO CHANGE THE ZONING CLASSIFICATION OF LANDS IN THE TOWN OF \_\_\_\_\_

TO THE COUNTY BOARD OF SUPERVISORS:  
Ladies & Gentlemen:

The undersigned hereby petitions the County Board of Supervisors to change the zoning classification of the following described land in Section \_\_, Town of \_\_\_\_\_, Your County, Wisconsin, from the \_\_\_\_\_ District to the \_\_\_\_\_ District.

Respectfully submitted on \_\_\_\_\_ 19\_\_ by:  
Agent: \_\_\_\_\_ Owner: \_\_\_\_\_

Name \_\_\_\_\_ Name \_\_\_\_\_  
\_\_\_\_\_

Street \_\_\_\_\_ Street \_\_\_\_\_  
Post \_\_\_\_\_ Post \_\_\_\_\_  
Office \_\_\_\_\_ Office \_\_\_\_\_

Telephone \_\_\_\_\_ Zip \_\_\_\_\_ Telephone \_\_\_\_\_ Zip \_\_\_\_\_

NOTICE OF PUBLIC HEARING

STATE OF WISCONSIN  
CITY/VILLAGE SS  
COUNTY OF \_\_\_\_\_

TO WHOM IT MAY CONCERN:

PUBLIC NOTICE is hereby given to all persons in the \_\_\_\_\_ of \_\_\_\_\_, Wisconsin, that a public hearing will be held on \_\_\_\_\_ 19\_\_, at \_\_\_\_\_ in the \_\_\_\_\_, \_\_\_\_\_, Wisconsin, relative to a proposal to vary the terms of the \_\_\_\_\_ Ordinance as follows: \_\_\_\_\_

\_\_\_\_\_ on the following described real estate, to wit:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

All persons interested are invited to attend said hearing and be heard.

\_\_\_\_\_  
County/City/Village  
Board of Adjustment/Appeals  
Chairman

Dated at \_\_\_\_\_  
this \_\_\_\_\_ day of \_\_\_\_\_  
19\_\_.

**NOTICE OF PUBLIC HEARING**  
**BEFORE BOARD OF ADJUSTMENT/APPEALS**  
**(SPECIAL MAIL NOTICE)**

Appeal No. \_\_\_\_\_  
Dated \_\_\_\_\_

Dear Property Owner:

The Board of Adjustment/Appeals will hold a public hearing on \_\_\_\_\_, 19\_\_, at \_\_\_ P.M. to hear the (appeal)(application) of Mr. \_\_\_\_\_ for (an interpretation of the Zoning Ordinance or Map)(a special exception)(a variance). The (appeal)(application) requests

---

at \_\_\_\_\_ Street. All interested parties wishing to be heard are requested to be present.

Board of Adjustment/Appeals

\_\_\_\_\_  
Secretary

PETITION # \_\_\_\_\_

C.U.P. # \_\_\_\_\_

The public hearing on your petition or application will be held on Tuesday \_\_\_\_\_ at 7:30 P.M. in Room #224 of the City-County Building.

It is necessary that you or your agent attend this public hearing. Failure to attend the public hearing will result in the denial of your petition or application.

Contact \_\_\_\_\_, Town Clerk,  
Telephone \_\_\_\_\_ to arrange a meeting with the  
Town Board of Planning Committee before the public hearing.

REPORT OF THE PLANNING & ZONING COMMITTEE ON ZONING PETITION NO. \_\_\_\_\_

REPORT

We, your Planning & Zoning Committee and the Zoning Administrator to whom was referred RESOLUTION NO. \_\_\_\_\_, ORDINANCE NO. \_\_\_\_\_, PETITION NO. \_\_\_\_\_, COMMUNICATION NO. \_\_\_\_\_, recommend that

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Committee

\_\_\_\_\_  
District Attorney

\_\_\_\_\_  
Land Agent

\_\_\_\_\_  
Zoning Officer

ADOPTED \_\_\_\_\_

City/Village  
County of

Board of Adjustment/Appeals

NOTICE OF ACTION ON APPEAL

Date \_\_\_\_\_  
Appeal Application # \_\_\_\_\_

DECISION

Appeal Application No. \_\_\_\_\_  
Land Use Appl. No. \_\_\_\_\_

Date \_\_\_\_\_

Owner \_\_\_\_\_

Lot \_\_\_\_\_  
Block \_\_\_\_\_  
Subdivision \_\_\_\_\_  
T \_\_\_\_\_  
R \_\_\_\_\_

Dear \_\_\_\_\_:

At the \_\_\_\_\_ meeting of the Board of Adjustment/Appeals,  
(date)  
your appeal for a(n) (interpretation)(variance)(special exception) was considered.

On the basis of the evidence presented at the hearing on this case, it was  
determined that your appeal be (granted)(denied)(modified as follows): \_\_\_\_\_

NOTE: Use Only If Decision Reversed

The \_\_\_\_\_ has been informed of our decision and has been  
ordered to issue a permit as requested subject to the above modifications.

A complete record of the hearing and the decision of the Board is available for  
your inspection at the \_\_\_\_\_  
(place available)

If copies from the record are desired, they may be secured upon request and  
payment of transcription costs.

Yours very truly,

\_\_\_\_\_, Secretary  
Board of Adjustment/Appeals

Copies to: Zoning Administrator  
Parties to Appeal  
Dept. of Natural Resources



County of We-Do-Right, WI

Date

Mr. John Doe, Permit Applicant  
P. O. Box 000  
We-Do-Right, WI

RE: Board of Adjustment Decision on Permit Application

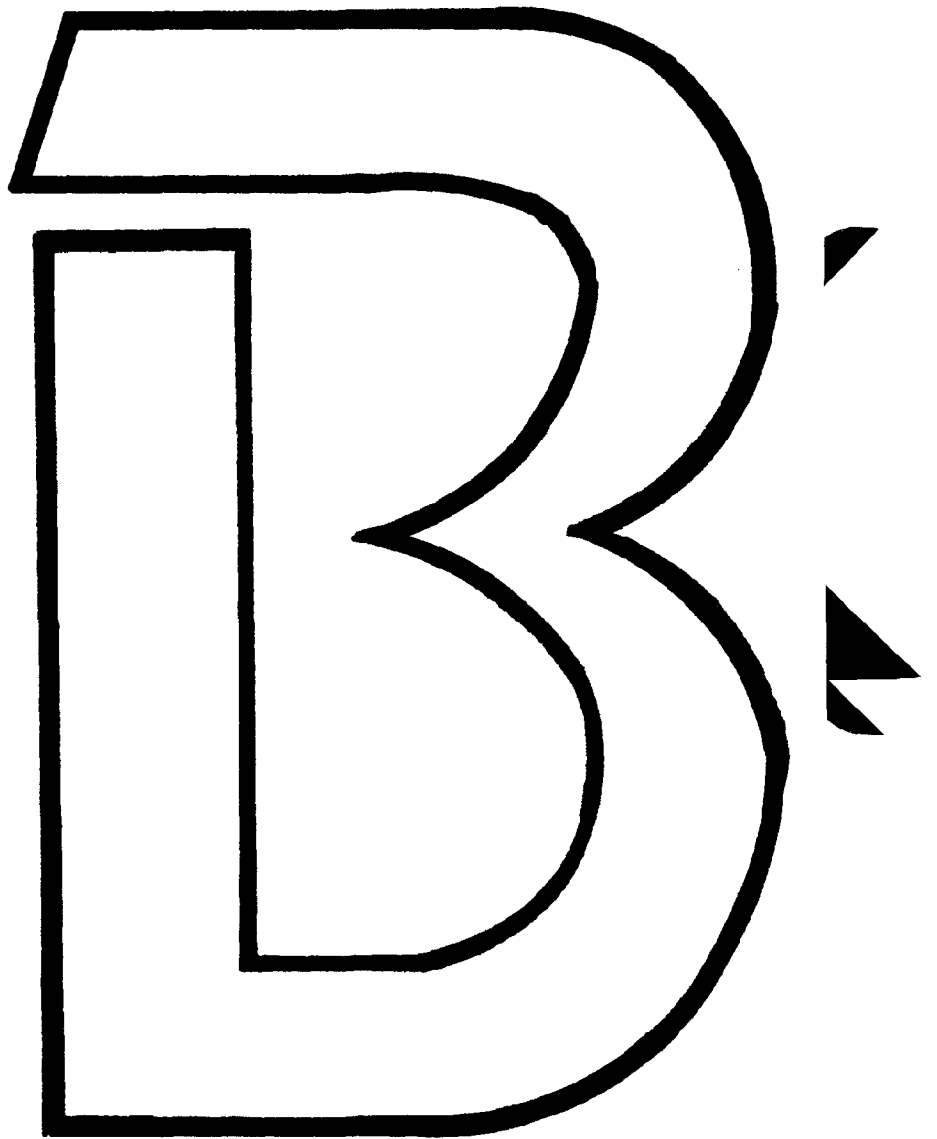
Dear Mr. Doe:

On September 8, 1981, the Board of Adjustment reviewed your permit application to construct a storage garage at 543 River Road and determined that the Floodplain Ordinance does ~~cause you~~ an exceptional hardship. Consequently, the Board hereby grants you a variance to the ordinance and you may build the garage with the lowest floor below the regional flood elevation of 891 FT M.S.L.

You are notified that this variance does not waive any flood insurance premium rates and the costs of insuring the garage will be commensurate with the increased risk resulting from the reduced elevation.

Sincerely,

Zoning Administrator  
We-Do-Right County, WI



**FLOODPLAIN  
REGULATORY FRAMEWORK**

## Section 87.30, Wisconsin Statutes Statutory Authority for Floodplain Zoning

**87.30 Flood plain zoning. (1) STATE POWERS.** (a) If any county, city or village does not adopt a reasonable and effective flood plain zoning ordinance within one year after hydraulic and engineering data adequate to formulate the ordinance becomes available, the department shall, upon petition of an interested state agency, a municipality or upon its own motion as soon as practicable and after public hearing, determine and fix by order the limits of any or all flood plains within a county, city or village within which serious damage may occur. Thereafter the department shall as soon as practicable after public hearing adopt a flood plain zoning ordinance applicable to a county, city or village, except that no flood plain zoning ordinance may be enacted unless the hydraulic and engineering studies necessary to determine the floodway or flood plain limits, or both, if both limits are deemed necessary by the department, have been made at state or federal expense. If the department utilizes hydraulic and engineering studies previously completed, the department shall be responsible for ensuring that the studies are reasonable and accurate. Thirty days' notice of all hearings on flood plain determination or zoning before the department shall be given to the county, city or village clerk, the clerks of all towns where lands may be affected and to the department of transportation. Exhibits and testimony shall be a part of the official record. Failure of a county, city or village to adopt a flood plain zoning ordinance for an area where appreciable damage from floods is likely to occur or to adopt an ordinance which will result in a practical minimum of flood damage in an area shall be prima facie proof of the necessity for action specified under this paragraph by the department. The department shall make a decision in writing of insufficiency of any county, city or village flood plain zoning ordinance before adopting an ordinance superseding a county, village or city ordinance. All orders of the department under this subsection which either fix the limits of flood plains or enact local flood plain zoning ordinances shall, when they are in final draft form and before they are issued, be referred to the appropriate standing committees of the legislature, where the procedure under s. 227.018 (2) shall apply. Orders of the department under this section shall, after becoming effective, be deemed rules for purposes of s. 13.56, and may be suspended by the joint committee for review of administrative rules.

NOTE: Chapter 437, laws of 1977, which amended par. (a), contained an extensive note explaining the amendment. See the 1977 session law volume.

(b) All final orders, determinations or decisions made under this subsection shall be subject to review under ch. 227 and be effective 20 days after the same have been served unless such order, determination and decision specifies a different date upon which the same shall be effective. Such flood plain determination and

zoning ordinance shall be of the same effect as if adopted by the county, city or village. Thereafter it is the duty of the county, city, village and town officials to administer and enforce the ordinance in the same manner as if the county, city or village had adopted it. Flood plain determinations and zoning ordinances so adopted may be modified by the county, city or village concerned only with the written consent of the department except that nothing in this subsection may be construed to prohibit a county, city, village or town from adopting a flood plain ordinance more restrictive than that adopted by the state.

(c) Except as provided under par. (a), the cost of such flood plain determination and ordinance promulgation and enforcement by the state shall be assessed against the county, city or village concerned and collected in substantially the same manner as other taxes levied by the state.

**(1m) JURISDICTION OVER DRAINAGE DITCHES LIMITED.** Notwithstanding any other provision of law or administrative rule promulgated thereunder, a flood plain zoning ordinance required under sub. (1) does not apply to lands adjacent to farm drainage ditches if:

(a) Such lands are not within the flood plain of a natural navigable stream or river;

(b) Those parts of such drainage ditches adjacent to such lands were nonnavigable streams before ditching or had no previous stream history; and

(c) Such lands are maintained in nonstructural agricultural use.

**(2) ENFORCEMENT AND PENALTIES.** Every structure, building, fill, or development placed or maintained within any flood plain in violation of a zoning ordinance adopted under this section, or s. 59.97, 61.35 or 62.23 is a public nuisance and the creation thereof may be enjoined and maintenance thereof may be abated by action at suit of any municipality, the state or any citizen thereof. Any person who places or maintains any structure, building, fill or development within any flood plain in violation of a zoning ordinance adopted under this section, or s. 59.97, 61.35 or 62.23 may be fined not more than \$50 for each offense. Each day during which such violation exists is a separate offense.

History: 1971 c. 164; 1975 c. 232, 301, 422; 1977 c. 29 s. 1654 (8) (c); 1977 c. 437, 447.

County flood plain zoning ordinances adopted by the department under this section do not need approval of the town boards in order to become effective within all unincorporated areas of the county. 62 Atty. Gen. 264.

The necessity of zoning variance or amendments notice to the Wisconsin department of natural resources under the shoreland zoning and navigable waters protection acts. Whipple, 57 MLR 25.

The public trust doctrine. 59 MLR 787.

The following pages are Chapter NR 116,  
**Wisconsin Administrative Code, Wisconsin's  
Floodplain Management Program.** It specifies the  
rules and procedures for regulating floodplain  
areas in Wisconsin.

Chapter NR 116

WISCONSIN'S FLOOD PLAIN MANAGEMENT PROGRAM

NR 116.01	Purpose	NR 116.12	Amendments of official floodway lines
NR 116.02	Applicability	NR 116.13	Uses in floodway areas
NR 116.03	Definitions	NR 116.14	Uses in flood fringe areas (outside of the floodway)
NR 116.04	Severability	NR 116.15	Nonconforming uses
NR 116.05	Adoption and upgrading of flood plain zoning ordinances	NR 116.16	Flood proofing
NR 116.06	Areas to be regulated	NR 116.17	Flood control works
NR 116.07	Regional flood flow determination	NR 116.18	Procedures for changing flood plain and floodway limits
NR 116.08	Water surface profile of the regional flood	NR 116.19	Appointment and duties of zoning administrator, zoning agency and board of adjustment/appeals
NR 116.09	Data required to be shown on flood plain zoning maps	NR 116.20	County, city and village re-zoning maps
NR 116.10	Conflicts between water surface profiles and flood plain zoning maps	NR 116.21	Permits, special exceptions, appeals and amendments
NR 116.11	Initial delineation of floodway lines	NR 116.22	Department duties

Note: Chapter NR 116 as it existed on July 31, 1977, was repealed and a new chapter NR 116 was created effective August 1, 1977.

**NR 116.01 Purpose.** (1) The Wisconsin legislature in enacting chapter 614, laws of 1965, recognized that flood plain zoning is a necessary tool to protect human life, health and to minimize property damages and economic losses. Counties, cities and villages are required by section 87.30, Wis. Stats., to adopt reasonable and effective flood plain zoning ordinances within their respective jurisdictions to regulate all flood plains where serious flood damage may occur.

(2) The purpose of these rules is to provide a uniform basis for the preparation and implementation of sound flood plain regulations for all Wisconsin flood plains to:

- (a) Protect life, health and property;
- (b) Minimize expenditures of public monies for costly flood control projects;
- (c) Minimize rescue and relief efforts, generally undertaken at the expense of the general public;
- (d) Minimize business interruptions;
- (e) Minimize damage to public facilities on the flood plains such as water mains, sewer lines, streets and bridges;
- (f) Minimize the occurrence of future flood blight areas on flood plains; and
- (g) Discourage the victimization of unwary land and home buyers.

History: Cr. Register, July, 1977, No. 259, eff. 8-1-77.

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**NR 116.02 Applicability.** The provisions of this chapter are applicable to flood plain management by counties, cities and villages. Unless otherwise specifically exempted by law, section 13.48(13), Wis. Stats., requires that all state agencies obtain all necessary permits required by local zoning ordinances.

History: Cr. Register, July, 1977, No. 259, eff. 8-1-77.

**NR 116.03 Definitions.** (1) **ACCESSORY USE.** An accessory use is any facility, structure, building or use which is accessory or incidental to the principal use of a property, structure or building.

(2) **CERTIFICATE OF COMPLIANCE.** A certificate of compliance is issued to a property owner by a county, city or village and certifies that the use of land or a building in the flood plain area is in conformance with the provisions of the flood plain zoning ordinance.

(3) **CHANNEL.** A channel is a natural or artificial watercourse with definite bed and banks to confine and conduct the normal flow of water.

(4) **DEPARTMENT.** Department refers to the state of Wisconsin department of natural resources.

(5) **ENCROACHMENT.** An encroachment is any fill, structure, building, use, accessory use or development in the floodway.

(6) **ENCROACHMENT/FLOODWAY LINES.** Encroachment/floodway lines are limits of obstruction to flood flows. These lines are on both sides of and generally parallel to the river or stream. The lines are established by assuming that the area landward (outside) of the encroachment/floodway lines will be ultimately developed in such a way that it will not be available to convey flood flows.

(7) **EQUAL DEGREE OF HYDRAULIC ENCROACHMENT.** The effect of any encroachment into the floodway must be computed by assuming an equal degree of hydraulic encroachment on the other side of a river or stream for a hydraulic reach. This computation assures that property owners up, down or across the river or stream will have the same rights of hydraulic encroachment. Encroachments are analyzed on the basis of the effect upon hydraulic conveyance, not upon the distance the encroachment extends into the floodway. Also see: Hydraulic Reach.

(8) **FLOOD.** A general and temporary condition of partial or complete inundation of normally dry land areas caused by the overflow or rise of rivers, streams or lakes.

(9) **FLOOD FREQUENCY.** The term flood frequency is a means of expressing the probability of flood occurrences and is generally determined from statistical analyses. The frequency of a particular flood flow is usually expressed as occurring, on the average, once in a specified number of years. Any particular flood flow could, however, occur more frequently than once in any given year.

(10) **FLOOD FRINGE.** The flood fringe is that portion of the flood plain outside of the floodway, which is covered by flood waters during the regional flood; it is generally associated with standing water rather than rapidly flowing water.

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(11) **FLOOD PLAIN.** The flood plain is the land which has been or may be hereafter covered by flood water during the regional flood. The flood plain includes the floodway and the flood fringe.

(12) **FLOOD PLAIN MANAGEMENT.** Flood plain management involves the full range of public policy and action for insuring wise use of flood plains. It includes everything from the collection and dissemination of flood control information to actual acquisition of flood plain lands, and the enactment and administration of codes, ordinances, and statutes for land use in the flood plain.

(13) **FLOOD PROOFING.** Flood proofing involves any combination of structural provisions, changes, or adjustments to properties and structures subject to flooding, primarily for the purpose of reducing or eliminating flood damage to properties, water and sanitary facilities, structures and contents of buildings in flood hazard areas.

(14) **FLOOD PROTECTION ELEVATION.** The flood protection elevation shall correspond to a point 2 feet of freeboard above the water surface profile associated with the regional flood and the official floodway lines. Also see: Freeboard.

(15) **FLOODWAY.** The floodway is the channel of a river or stream and those portions of the flood plain adjoining the channel required to carry and discharge the flood water or flood flows associated with the regional flood.

(16) **FREEBOARD.** Freeboard is a factor of safety usually expressed in terms of a certain amount of feet above a calculated flood level. Freeboard compensates for the many unknown factors that contribute to flood heights greater than the height calculated. These unknown factors include, but are not limited to, ice jams, debris accumulation, wave action, obstruction of bridge openings and floodways, the effects of urbanization on the hydrology of the watershed, loss of flood storage areas due to development and aggradation of the river or stream bed.

(17) **HIGH FLOOD DAMAGE POTENTIAL.** High flood damage potential is associated with any danger to life or health and any significant economic loss to a structure or building or its contents.

(18) **HYDRAULIC FLOODWAY LINES.** Hydraulic floodway lines shall delineate the channel of the river or stream and those portions of the adjoining flood plains which are reasonably required to carry and discharge the regional flood flow without any measurable increase in flood heights.

(19) **HYDRAULIC REACH.** A hydraulic reach along a river or stream is that portion of the river or stream extending from one significant change in the hydraulic character of the river or stream to the next significant change. These changes are usually associated with breaks in the slope of the water surface profile, and may be caused by bridges, dams, expansion and contraction of the water flow, and changes in stream bed slope or vegetation.

(20) **LEVEE.** A levee is a continuous dike or embankment of earth constructed parallel to a river or stream to prevent flooding of certain areas of land.

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(21) **NONCONFORMING USE.** A nonconforming use is an existing lawful use of a structure, building or accessory use which is not in conformity with the provisions of the flood plain zoning ordinance for the area of the flood plain which it occupies.

(22) **OFFICIAL FLOODWAY LINES.** Official floodway lines are those lines which have been adopted by the county, city or village, approved by the department, and which are shown on the official flood plain zoning maps and used for regulatory purposes.

(23) **OPEN SPACE USE.** Open space uses are those uses having a relatively low flood damage potential, such as those uses associated with agriculture, recreation, parking, storage yards, or certain sand and gravel operations.

(24) **REGIONAL FLOOD.** The regional flood is a flood determined to be representative of large floods known to have generally occurred in Wisconsin and which may be expected to occur on a particular stream because of like physical characteristics. The regional flood is based upon a statistical analysis of streamflow records available for the watershed and/or an analysis of rainfall and runoff characteristics in the general watershed region. The flood frequency of the regional flood is once in every 100 years; this means that in any given year there is a 1% chance that the regional flood may occur. During a typical 30-year mortgage period, the regional flood has a 26% chance of occurring.

(25) **SPECIAL EXCEPTION (CONDITIONAL USES).** A special exception (also called a conditional use) is a use which is permitted by the flood plain zoning ordinance provided certain conditions specified in the ordinance are met and a permit is granted by the board of adjustment/appeals or, where appropriate, the zoning committee.

(26) **STANDARD PROJECT FLOOD.** The standard project flood is a hypothetical flood, estimated by the corps of engineers, representing the flood runoff volume and peak discharge that may be expected from the most severe combination of meteorological and hydrologic conditions that are considered reasonably characteristic of the geographical region involved, excluding extremely rare combinations.

(27) **STRUCTURE.** A structure is any man-made object with form, shape and utility, either permanently or temporarily attached to or placed upon the ground, river bed, stream bed or lakebed.

(28) **UNNECESSARY HARDSHIP.** Unnecessary hardship is any unique and extreme inability to conform to the provisions of a flood plain zoning ordinance due to physical factors which are not solely related to economic gain or loss. Unnecessary hardship is present only where, in the absence of a variance, no feasible use can be made of the property.

(29) **VARIANCE.** A variance authorizes the construction or maintenance of a building or structure in a manner which is inconsistent with dimensional standards contained in the flood plain zoning ordinance. A variance can only be granted by the board of adjustment/appeals. A variance shall not permit a use of property otherwise prohibited by the flood plain zoning ordinance; it may permit deviations from dimensional standards.

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(30) **WATERSHED.** A watershed is a region or area contributing ultimately to the water supply of a particular watercourse or body of water.

(31) **WATER SURFACE PROFILE.** The water surface profile is a graphical representation of the height of the water surface throughout a county, city or village based upon a certain flow passing through the river or stream. A water surface profile based upon flows occurring during a regional flood is used in regulating the flood plain areas.

(32) **WELL.** A well is an excavation or opening in the ground made by digging, boring, drilling, driving or other methods, for the purpose of obtaining ground water.

History: Cr. Register, July, 1977, No. 259, eff. 8-1-77.

**NR 116.04 Severability.** Should any section, paragraph, phrase, sentence or clause of this chapter be declared invalid or unconstitutional for any reason, the remainder of this chapter shall not be affected thereby.

History: Cr. Register, July, 1977, No. 259, eff. 8-1-77.

**NR 116.05 Adoption and upgrading of flood plain zoning ordinances.** (1) **ADOPTION.** Counties, cities and villages shall adopt, and continue to administer and enforce, reasonable flood plain zoning ordinances for all streams and flood plains within their respective jurisdictions. These ordinances shall meet or exceed the standards in this chapter.

(2) **INCLUSION IN LOCAL REGULATIONS, CODES AND PROGRAMS.** Where necessary to insure the effectiveness of flood plain zoning ordinances, the standards in this chapter shall be included in subdivision regulations, building and sanitary codes, flood insurance regulations, and other related programs.

(3) **SUBSTITUTION.** Where the department finds that one or more of the following regulations, codes or programs will accomplish the purpose of section NR 116.01, these regulations, codes or programs may be substituted in lieu of all or portions of flood plain zoning ordinances:

- (a) Acquisition of flooding easements to insure open space uses in flood plain areas.
- (b) Flood warning systems.
- (c) Building codes.
- (d) Subdivision regulations.
- (e) Sanitary codes.
- (f) Zoning or purchase of the entire flood plain to permit only open space uses.

(4) **UPGRADING ORDINANCES.** Within 6 months from the time any of the information listed below is available, local units of government shall upgrade flood plain zoning ordinances, using the amendment procedure in section NR 116.21, to reflect current information such as the following:

- (a) Flood data.

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(b) Flood plain management statutes.

(c) Flood plain management rules.

(d) Flood plain management case law.

(e) Hydrologic data.

(f) Improved technical information and methods.

History: Cr. Register, July, 1977, No. 259, eff. 8-1-77.

**NR 116.06 Areas to be regulated.** Counties, cities and villages shall develop flood plain zoning maps, reflecting the best available data, which show the areas to be regulated. They shall also develop flood plain zoning ordinances to define proper uses in those regulated areas. These flood plain maps and zoning ordinances shall regulate all flood plains, and the minimum limits for regulatory purposes shall be all those areas covered by waters during the regional flood.

History: Cr. Register, July, 1977, No. 259, eff. 8-1-77.

**NR 116.07 Regional flood flow determination.** The method of determining the discharge for the regional flood shall be based upon the guidelines contained herein.

(1) **COMPREHENSIVE STUDIES - GENERAL RULE.** Comprehensive studies to determine the regional flood flow discharge for a significant segment of a river or stream shall generally use the log-Pearson Type III distribution method as described in Bulletin #17 of the Hydrology Committee, U.S. Water Resources Council, entitled "Guidelines For Determining Flood Flow Frequency", March 1976. The technique described in Bulletin #17 shall be modified under the following circumstances:

(a) When determining skew, a log-normal analysis (zero skew) shall be used instead of the generalized skew map found in Bulletin #17.

(b) When less than 100 years of adequate data is available for the applicable watershed gaging station, regional flood flow frequency discharge shall be determined by more than one method in accordance with the chart on page 17 of said Bulletin #17.

(c) Where the discharge events of record can be separated into those occurring due to rainfall and those due to melting snow, those events shall be analyzed separately and separate frequency curves developed. These curves shall then be combined to determine the critical flood flow frequency discharge.

(d) Outliers are defined in Bulletin #17. The technique described in Bulletin #17 eliminates low outliers. Computations which do not eliminate low outliers shall be made to determine flood flow frequency discharges. These computations shall be compared to those which eliminate low outliers, and then shall be submitted to the department for its determination of reasonable flood flow frequency discharge.

(2) **COMPREHENSIVE STUDIES - EXCEPTIONAL TECHNIQUES.** Comprehensive studies to determine regional flood flow discharges for significant segments of a river or stream shall be computed using synthetic hydrographs, which are combined and routed through the

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basin to critical locations within the municipal limits, when any of the following conditions exist in the watershed:

(a) The watershed is or has been rapidly urbanizing so that runoff during storms is significantly increased relative to conditions existing during that period of available record. This method shall apply when significant increases in urbanization occur. One example of significant urbanization is where more than 20% of the watershed has been urbanized or where the urbanization of the watershed has exceeded a 10% growth rate in any 10-year period.

(b) Dams upstream of the study area affect the validity of gaging records on the river or stream.

(c) Flood plain development upstream of the study area has significantly altered storage capacity of the river or stream so as to affect the validity of gaging records.

(3) CASE-BY-CASE ANALYSIS. Where comprehensive studies do not exist for a given river or stream, a case-by-case analysis is required for regional flood flow discharge determinations. This case-by-case analysis on proposed developments in the flood plain areas shall be made using several acceptable techniques, which include at least one of the following:

(a) When adequate gaging data exists, the applicable technique described in subsection (1) or subsection (2) shall be used.

(b) When inadequate gaging data exists, acceptable hydrologic techniques shall be used, which include at least one of the following:

1. The current USGS empirical equations, developed from regression analysis of stream gaging data, using a positive upper confidence interval equal to one standard error of estimate. (See USGS Publication entitled "Estimating Magnitude and Frequency of Floods in Wisconsin", by Conger.)

2. Current USDA soil conservation service techniques, such as found in Section 4, SCS National Engineering Handbook (NEH4) entitled "Hydrology", SCS, U.S.D.A., Technical Release No. 55 (TR55), entitled "Urban Hydrology For Small Watersheds", Engineering Division, SCS, U.S.D.A., January, 1975.

(c) Drainage area comparisons shall be used only in combination with one of the above techniques.

(4) ADDITIONAL REQUIREMENTS - RAPIDLY URBANIZING WATERSHEDS. In watersheds where significant future development is projected, the county, city or village may require that computations for regional flood flow discharges shall reflect increased runoff from such anticipated future development. These computations shall be made using one of the following techniques:

(a) A synthetic hydrograph based upon projected watershed development shall be produced at various locations, and then combined and routed through the basin to critical locations within the study limits.

(b) A mathematical model shall be developed to determine the effects of various projected developments in the watershed on the regional flood flow discharge. Local units of government may project

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what percentage of watershed development they will allow and shall determine regional flood flow discharges based upon that data. Where watersheds contain more than one local unit of government, agreements between those local units of government may be necessary to restrict future watershed development. In order to insure that future flood flows do not exceed the regional flood flow discharges used in regulations by those local units of government, future watershed development may be restricted to a certain percentage of the watershed.

(5) APPROVAL OF OTHER METHODS OF COMPUTATION. In special instances the department may use or authorize the use of other acceptable hydrologic methods for determining regional flood flow discharges.

(6) The document referred to in Subsection (1) is available for inspection at the U.S. Water Resources Council, 2120 L Street, Northwest, Suite 800, Washington, D.C. 20037; it may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (mention title and stock number 052-045-00031-2). The document referred to in Subsection (3) (b) 1 is available for inspection at the Geological Survey - Water Resource Division, U.S. Department of the Interior, at the following four locations: 1815 University Avenue, Madison, Wisconsin 53706; 1 East Eau Claire Street, Rice Lake, Wisconsin 54868; 1029 1/2 East Main Street, Merrill, Wisconsin 54452; 500 Riverview Avenue, Waukesha, Wisconsin 53186. The documents referred to in Subsection (3) (b) 2 are available for inspection at the Soil Conservation Service, U.S. Department of Agriculture, 4601 Hammersley Road, Madison, Wisconsin 53711; they may be purchased from the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22151 (mention title and appropriate accession number: NEH4 = PB244463/AS; TR55 = PB244531/AS).

(7) Copies of the documents referred to in subsections (1), (3) (b) 1 and (3) (b) 2 are also available for inspection in the following offices:

(a) The Department of Natural Resources, 4610 University Avenue, Madison, Wisconsin;

(b) The Office of the Secretary of State, Capitol, Madison, Wisconsin;

(c) The Office of the Revisor of Statutes, Capitol, Madison, Wisconsin.

History: Cr. Register, July, 1977, No. 259, eff. 8-1-77.

**NR 116.08 Water surface profile of the regional flood.** After computation of the regional flood flow discharge, using the methods contained in section NR 116.07, a water surface profile based upon that data shall be developed showing the elevations of the regional flood along the streams and flood plains in the county, city or village. The elevations on this profile shall be used to develop the flood plain zoning maps.

History: Cr. Register, July, 1977, No. 259, eff. 8-1-77.

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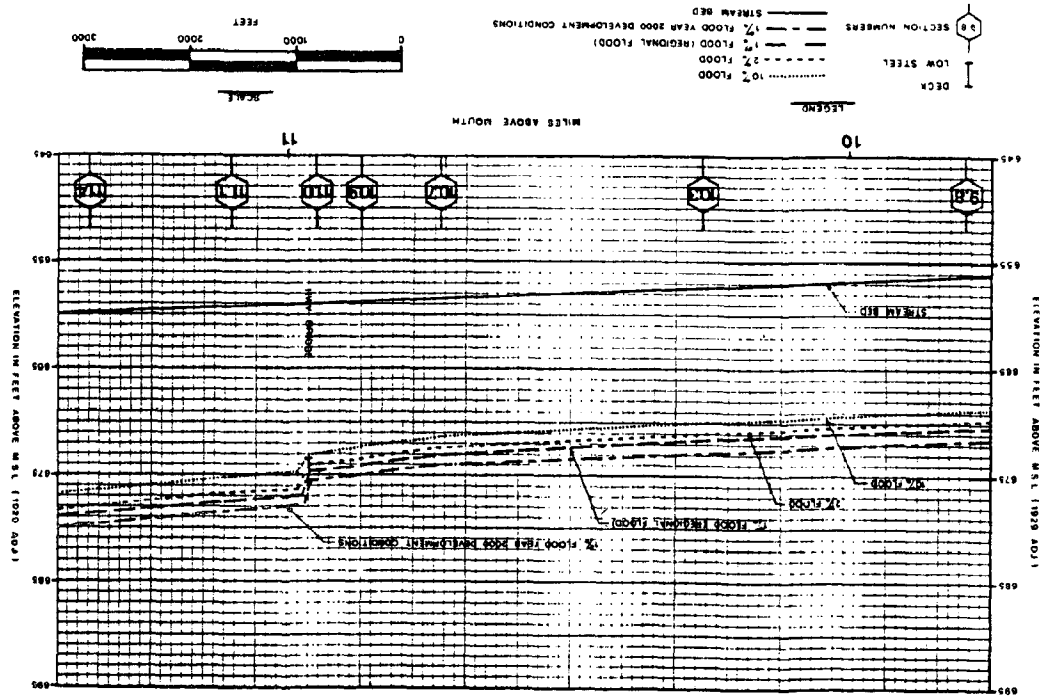


Figure 1  
 HIGH WATER AND STREAM BED PROFILES  
 OF THE  
 RIVER  
 NAME \_\_\_\_\_  
 CITY \_\_\_\_\_  
 WISCONSIN

NR 116.09 Data required to be shown on flood plain zoning maps. The flood plain zoning maps shall delineate the entire flood plain (that area covered during the regional flood).

(1) WHERE ADEQUATE ENGINEERING DATA EXISTS. Where adequate engineering data exists the maps shall show the following:

(a) The floodway area (that area necessary to pass the regional flood);

(b) The flood fringe area (that area outside the floodway but still covered by the regional flood);

(c) The regional flood elevation, consistent with the water surface profile of the regional flood, should be clearly lettered at identifiable positions on the official flood plain zoning maps. If for any reason that elevation is not shown on the maps, the profile shall be attached to and made part of said maps; and

(d) Where technical information is available to ascertain the magnitude of floods larger than the regional flood (such as the standard project flood), the flood plain limits of these large floods may be reflected on the official flood plain zoning maps for public information purposes.

(2) WHERE ADEQUATE ENGINEERING DATA DOES NOT EXIST. Where adequate engineering data does not exist, maps based upon historical floods, flood prone area maps, flood hazard boundary maps, aerial photos or detailed soils maps may initially serve as a basis for flood plain delineation, provided that:

(a) The associated text of the zoning ordinance provides for a procedure similar to sections NR 116.20(2) and NR 116.21(3) to ascertain the effects of the proposed construction of every project upon flood flows and the flood protection elevation; and

(b) The local unit of government has initiated a program to ultimately obtain an engineering study for regional flood data in problem areas.

History: Cr. Register, July, 1977, No. 259, eff. 8.1.77.



the state law. In these cases, only the official floodway lines shall be shown on the flood plain zoning maps; the current hydraulic floodway lines, which reflect the water surface profile used for regulation, shall be kept on file by the county, city or village.

History: Cr. Register, July, 1977, No. 259, eff. 8-1-77.

**NR 116.12 Amendments of official floodway lines.** (1) INITIAL DETERMINATIONS: Prior to amending official floodway lines, for whatever reason, a county, city or village shall:

- (a) Assure that the provisions of section NR 116.11 (2) (b) are met;
- (b) Require adequate technical data from the applicant and submit such data to the department for review and concurrence in the effect of the proposed amendment on the height of the regional flood; and
- (c) Assure that the proposed amendments meet the purpose of section NR 116.01.

(2) AMENDMENT PROCESS. Upon completion of the steps in subsection (1) above, the county, city or village shall meet all applicable legal requirements for amending its water surface profiles, flood plain zoning maps, and zoning ordinances.

(3) SUBMISSION TO THE DEPARTMENT FOR APPROVAL. If the county, city or village amends its official floodway lines, it shall also amend its water surface profiles, flood plain zoning maps and flood plain zoning ordinances and submit these amendments to the department for approval pursuant to section NR 116.21 (6).

History: Cr. Register, July, 1977, No. 259, eff. 8-1-77.

**NR 116.13 Uses in floodway areas.** (1) PROHIBITED USES. The following uses are generally prohibited in floodway areas: Any fill, deposit, obstruction, excavation, storage of materials, or structure which, acting alone or in combination with existing or future similar works, will cause an increase equal to or greater than 0.1 foot (3 cm.) in the height of the regional flood or will affect the existing drainage courses or facilities. Said increase shall be calculated using an equal degree of hydraulic encroachment from the hydraulic floodway lines for a hydraulic reach on both sides of a river or stream. Increases equal to or greater than 0.1 foot (3 cm.) may be permitted, but only if amendments are made to the official floodway lines, water surface profile, flood plain zoning maps and flood plain zoning ordinances. All such amendments shall meet the provisions of sections NR 116.12 and NR 116.21 (6). Notwithstanding any of the above language, the following uses are always prohibited in floodway areas:

- (a) Any structures that are:
  1. Designed for human habitation; or
  2. Associated with high flood damage potential; or
  3. Not associated with permanent open space uses.
- (b) Any storage of materials that are buoyant, flammable, explosive, or injurious to human, animal, plant, fish or other aquatic life.

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(c) Any uses which are not in harmony with, or which may be detrimental to, the uses permitted in the adjoining districts.

(d) Any on-site sewage disposal system, whether public or private, except portable latrines that are removed during flooding, or systems associated with public recreational areas that meet the applicable provisions of local zoning ordinances and Wis. Adm. Code section H 62.20.

(e) Any wells, whether public or private, which are used to obtain water for ultimate human consumption.

(f) Any solid waste disposal site, whether public or private.

(2) PERMITTED USES. Counties, cities and villages, using the appropriate procedure described in section NR 116.21, may issue permits allowing the uses in floodway areas described below, but only if the effects of such uses are consistent with all of the standards contained in subsection (1) above.

(a) Open space uses having a relatively low flood damage potential, such as those uses associated with agriculture, recreation, parking, storage yards, or certain sand and gravel operations.

(b) Certain structures which are accessory to permitted open space uses or historical areas, if the structures meet all of the following criteria:

1. Are not designed for human habitation;
2. Have a low flood damage potential;
3. Are to be constructed and placed on the building site so as to offer minimum obstruction to the flow of flood waters. Whenever possible, structures will be constructed with the longitudinal axis parallel to the direction of flow of flood waters, and will be placed with their longitudinal axes approximately on the same line as those of adjoining structures;
4. Are firmly anchored to prevent them from floating away and restricting bridge openings or other restricted sections of the stream or river; and
5. All service facilities, such as electrical and heating equipment, must be at or above the flood protection elevation for the particular area.

(c) Campgrounds, provided all of the following criteria are met and approval is granted by the department:

1. The character of the river system and the elevation of all portions of the campground are such that 72 hours warning of an approaching flood can be given to all persons using that campground;
2. An adequate flood warning system is in existence which will provide for proper notice to all persons in the campground and make evacuation mandatory. Such a system shall involve an annual renewable written agreement between the weather bureau or corps of engineers, and the county sheriff or city police which shall specify a flood elevation at which evacuation shall occur;

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lines, water surface profiles, flood plain zoning maps and flood plain zoning ordinances in accordance with the provisions of sections NR 116.12 and NR 116.21(6).

(d) Flood fringe developments may be permitted only when such developments do not materially affect the storage capacity of the flood plains, based upon an equal degree of hydrologic encroachment (volume of storage area that is lost), particularly in flood plain areas upstream from urban areas. For the purposes of this subsection, "materially" is defined as any increase in the discharge of the regional flood which causes a rise in the water surface profile of 0.1 foot (3 cm.).

(2) **RESIDENTIAL USES.** (a) Any structure or building used for human habitation (seasonal or permanent), which is to be erected, constructed, reconstructed, altered, or moved into the flood fringe area shall be placed on fill, with the finished surface of the first floor at or above the flood protection elevation. If any such structure or building has a basement, it shall be flood proofed in accordance with section NR 116.16. Any community that is eligible for the federal flood insurance program must comply with the HUD standards which currently do not allow basements in flood plain areas. An exception to that basement requirement may be granted by HUD, but only on a community-by-community basis.

(b) Fill elevation shall:

1. Be one foot above the regional flood profile elevation, which is based upon the official floodway lines;
2. Extend at such elevation at least 15 feet beyond the limits of any structure or building erected thereon; and
3. Be contiguous to lands outside the flood plain where the depth and duration of flood waters are sufficient to cause rescue and relief problems.

(c) Where existing streets or sewer lines are at elevations which make compliance with these provisions impractical, the department may authorize the use of other flood proofing measures or methods in accordance with section NR 116.16. The structure or building shall be flood proofed to the flood protection elevation.

(3) **ACCESSORY USES.** An accessory structure (not connected to a principal structure) shall meet the applicable provisions of section NR 116.13(2) (b) 1., 2., 4. and 5. A lesser degree of protection, compatible with these criteria and the criteria in subsection (4) below, may be permissible for any such accessory structure.

(4) **COMMERCIAL USES.** Any commercial structure or building which is to be erected, constructed, reconstructed, altered or moved into the flood fringe area shall meet the requirements of subsections (2) (a) and (b) above. Certain yards, parking lots and other accessory land uses may be at lower elevations. However, no such area in general use by the public shall be inundated to a depth greater than 2 feet or subjected to flood velocities greater than 4 feet per second upon the occurrence of the regional flood. Depths greater than 2 feet may be permitted by the department provided an adequate warning system exists to protect life and property.

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3. The campground complies with all applicable local and state laws and regulations, including those of the department of health and social services;

4. The campground shall have signs at all entrances warning of the flood hazard involved;

5. Only mobile recreational vehicles with self-contained holding tanks or easily removable tents are allowable. No other habitable structures or buildings are permitted;

6. No roads are filled more than 0.5 foot (15 cm.) above the natural ground elevation;

7. On-site sewage disposal systems may be permitted provided they meet the applicable provisions of Wis. Adm. Code section H 62.20 (this is an exception to section NR 116.13(1) (d)).

8. Litter collection facilities shall be placed at or flood proofed to the flood protection elevation or be removed during flooding.

(d) Uses permitted by the department pursuant to chapters 30 and 31, Wis. Stats., provided that the necessary permits and amendments are granted by the county, city or village to the official floodway lines, water surface profiles, flood plain zoning maps and flood plain zoning ordinances.

(e) Public utilities, streets and bridges provided that:

1. Adequate flood proofing measures are provided to the flood protection elevation;
2. Construction shall not cause any increase equal to or greater than 0.1 foot (3 cm.) in the height of the regional flood as reflected in the water surface profile based upon existing conditions, except that reasonable increases shall be approved if the conditions of section NR 116.11(2) (b) are met; and

3. The county, city or village amends its official floodway lines, water surface profiles, flood plain zoning maps and flood plain zoning ordinances to reflect any changes resulting from such construction in accordance with the provisions of sections NR 116.12 and NR 116.21(6).

History: Cr. Register, July, 1977, No. 259, sff. 8-1-77.

NR 116.14 Uses in flood fringe areas (outside of the floodway).

(1) **GENERAL.** (a) Counties, cities and villages, using the appropriate procedure described in section NR 116.21, may issue permits allowing uses in flood fringe areas which are compatible with the criteria in this section.

(b) All flood fringe developments shall be compatible with local comprehensive plans. In the absence of formal plans, development shall be compatible with the uses permitted in adjoining districts.

(c) Flood fringe developments may be permitted only when such developments do not cause any increase equal to or greater than 0.1 foot (3 cm.) in the height of the regional flood of any tributaries to the main stream, drainage ditches, or any other drainage facilities or systems. Increases greater than 0.1 foot (3 cm.) may be permitted, but only if amendments are made to the affected official floodway

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(5) **MANUFACTURING AND INDUSTRIAL USES.** Any manufacturing or industrial structure or building which is to be erected, constructed, reconstructed, altered or moved into the flood fringe area shall be protected to the flood protection elevation utilizing fill, levees, floodwalls, adequate flood proofing measures or any combination thereof. On streams or rivers having protracted flood durations, greater protection may be required to minimize interference with normal plant operations. A lesser degree of protection, compatible with these criteria and the criteria in subsection (4) above, may be permissible for storage yards, parking lots and other auxiliary uses.

(6) **STORAGE OF MATERIALS.** Storage of any materials which are buoyant, flammable, or explosive, or which in times of flooding could be injurious to property, water quality, or human, animal, plant, fish or aquatic life, shall be either flood proofed to or placed at or above the flood protection elevation. Adequate measures shall be taken to assure that said materials will not enter the river or stream during flooding.

(7) **PUBLIC UTILITIES, STREETS AND BRIDGES.** (a) When failure or interruption of public facilities would result in danger to the public health or safety or where such facilities are essential to the orderly functioning of the area, adequate flood proofing measures shall be provided to the flood protection elevation; a lesser degree of protection may be provided for minor or auxiliary roads or utilities when these conditions do not exist.

(b) Public utilities, streets and bridges on the flood fringe should be designed to be compatible with the local comprehensive flood plain development plans.

(8) **SEWAGE SYSTEMS.** All on-site sewage disposal systems shall meet the applicable provisions of the local zoning ordinances and Wis. Adm. Code section H 62.20 and chapter H 65.

(9) **WELLS.** All wells, whether public or private, shall be flood proofed to the flood protection elevation and shall meet the applicable provisions of Wis. Adm. Code chapters NR 111 and NR 112.

(10) **SOLID WASTE DISPOSAL SITES.** All solid waste disposal sites, whether public or private, are prohibited in flood fringe areas.

(11) **DEPOSITION OF MATERIALS.** Any deposition of materials for any purpose may be permitted only if the provisions of this section are met.

History: Cr. Register, July, 1977, No. 269, eff. 8-1-77.

**NR 116.15 Nonconforming uses.** (1) **GENERAL.** Insofar as the standards in this section are not inconsistent with the provisions of sections 59.97(10) and 62.23(7)(h), Wis. Stats., they shall apply to all nonconforming uses. The existing lawful use of a structure or building or its accessory use which is not in conformity with the provisions of a flood plain zoning ordinance may be continued subject to the following conditions:

(a) No modifications or additions to a nonconforming use shall be permitted unless they are made in conformity with the provisions of this section. For the purposes of this section, the words "modification" and "addition" shall include, but not be limited to,

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any alteration, addition, modification, rebuilding or replacement of any such existing structure or accessory use. Ordinary maintenance repairs are not considered structural repairs, modifications or additions; such ordinary maintenance repairs include internal and external painting, decorating, paneling and the replacement of doors, windows and other nonstructural components; and

(b) If a nonconforming use is discontinued for 12 consecutive months, it is no longer permitted and any future use of the structure or building shall conform with the appropriate provisions of the flood plain zoning ordinance for floodway and flood fringe areas.

(2) **COUNTY, CITY AND VILLAGE RESPONSIBILITIES.** (a) County, city and village flood plain zoning ordinances shall regulate nonconforming uses in a manner consistent with this section and the applicable state statutes. These regulations shall apply to the modification or addition of any structure or to the use of any structure or premises which was lawful before the passage of the flood plain zoning ordinance or any amendment thereto.

(b) As requests are received for modifications or additions to nonconforming structures in the floodway, counties, cities and villages shall develop a list of those nonconforming structures, their assessed value and a list of the cost of those activities associated with changes to those structures enumerated in section NR 116.15(3)(a).

(3) **FLOODWAY AREAS.** (a) No modifications or additions shall be allowed to any existing structures which are not in compliance with permitted floodway standards or uses, unless such modifications or additions have been granted by permit, special exception (conditional use) or variance and meet all of the following criteria:

1. The modifications or additions to a structure will not increase the amount of obstruction to flood flows;

2. Any addition to a structure shall be flood proofed, by means other than the use of fill, to the flood protection elevation;

3. In areas regulated by counties, no structural repairs, modifications or additions to a structure, which exceed over the life of the structure 50% of its present equalized assessed value shall be allowed unless the entire structure is flood proofed, by means other than the use of fill, to the flood protection elevation. In areas regulated by cities and villages, no structural repairs, modifications or additions to a structure, which exceed over the life of the structure 50% of its present equalized assessed value, shall be allowed unless the entire structure is permanently changed to a conforming use; and

4. If any nonconforming structure is destroyed or is so badly damaged that it cannot be practically restored, it cannot be replaced, reconstructed, or rebuilt unless the provisions of sections NR 116.13 and NR 116.14 are met. For the purposes of this subsection, restoration is deemed impractical where the total cost of such restoration would exceed 50% of the present equalized assessed value of said structure. Where such damage occurs in areas regulated by counties, the entire structure shall be flood proofed to the flood protection elevation, by means other than fill.

(b) No new on-site sewage disposal system, or additions to existing on-site sewage disposal systems, shall be allowed in a floodway area.

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Any replacement, repair or maintenance of an on-site sewage disposal system in a floodway area shall meet the applicable provisions of the flood plain zoning ordinance and Wis. Adm. Code section H 62.20.

(c) No new well or modifications to an existing well, used to obtain water for ultimate human consumption shall be allowed in a floodway area. Any replacement, repair or maintenance of a well in a floodway area shall meet the applicable provisions of the flood plain zoning ordinance and Wis. Adm. Code chapters NR 111 and NR 112.

(4) **FLOOD FRINGE AREAS.** (a) No modifications or additions to any existing structure or building in the flood fringe area shall be permitted unless such modifications and additions comply with the applicable regulations for that particular use in flood fringe areas as contained in the local ordinances.

(b) Where compliance with the provisions of paragraph (a) above would result in unnecessary hardship, and only where the structure will not be either used for human habitation or be associated with a high flood damage potential, the county, city or village may grant a variance from those provisions, using the criteria listed below. Modifications or additions to structures or buildings which are protected to elevations lower than the flood protection elevation may be permitted if:

1. Human lives are not endangered;
2. Public facilities, such as water or sewer, are not to be installed;
3. Flood depths will not exceed 4 feet;
4. Flood velocities will not exceed 2 feet per second; and
5. The structure will not be used for storage of materials described in section NR 116.14 (6).

(c) Any new, addition to, replacement, repair or maintenance of an on-site sewage disposal system in a flood fringe area shall meet all the applicable provisions of the flood plain zoning ordinances and Wis. Adm. Code section H 62.20 and chapter H 65.

(d) Any new, addition to, replacement, repair or maintenance of a well in a flood fringe area shall meet the applicable provisions of the flood plain zoning ordinance and Wis. Adm. Code chapters NR 111 and NR 112.

History: Cr. Register, July, 1977, No. 259, eff. 8-1-77.

**NR 116.16 Flood proofing.** (1) **GENERAL.** When flood proofing measures are required by either local ordinances of chapter NR 116, such measures shall be designed to withstand the flood velocities, depths, forces, flotation and other factors associated with the regional flood, to assure protection to the flood protection elevation. A plan or document, certified by a registered professional engineer or architect that the flood proofing measures are adequately designed, shall be submitted to the local unit of government prior to its authorization to proceed.

(2) **FLOOD PROOFING MEASURES.** Flood proofing measures shall include, but are not limited to, the following:

- (a) Anchorage of structures to foundations.

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- (b) Installation of water-tight doors, bulkheads and shutters.
- (c) Reinforcement of walls and floors to resist water pressures.
- (d) Use of paints, membranes or mortars to reduce seepage of water through walls.

(e) Addition of mass or weight to structures to prevent flotation.

(f) Installation of pumps to lower water levels in structures.

(g) Construction of wells, water supply and waste treatment systems so as to prevent the entrance of flood waters into such systems.

(h) Subsurface drainage systems, including pumping facilities, to relieve external foundation wall and basement flood pressures.

(i) Cutoff valves on sewer lines or the elimination of gravity flow basement drains.

(j) Placement of essential utilities above flood protection elevations.

History: Cr. Register, July, 1977, No. 259, eff. 8-1-77.

**NR 116.17 Flood control works or protective works.** (1) **LEVEES OR FLOODWALLS.** (a) No increase equal to or greater than 0.1 foot (3 cm.) in the height of the regional flood caused by construction of levees or floodwalls shall be allowed unless the increase is wholly contained within the upstream extent of such levee or flood wall, or unless amendments are made to the official floodway lines, water surface profiles, flood plain zoning maps and flood plain zoning ordinances in accordance with the provisions of sections NR 116.12 and NR 116.21 (6).

(b) The minimum height and design of any levee or floodwall shall be calculated using whichever of the following provides the greater protection from floods:

1. The flood profile of the regional flood, with that regional flood confined between the proposed levees or floodwalls, plus 3 feet of freeboard; or
2. The standard project flood and/or the 500-year flood confined between the proposed levees or floodwalls.

(c) Exceptions to the standards prescribed in paragraph (b) above may be granted by the department on a case-by-case basis for levees and floodwalls not used to protect human life.

(d) All flood plain developments landward of any levee or floodwall shall provide for interior drainage using designated ponding areas, pumps or other similar means.

(e) The criteria in section NR 116.14 shall apply to flood fringe development until such time as the levees and floodwalls are constructed and operative. If such levees or floodwalls become inadequate or inoperative, the zoning regulations shall be amended to reflect the reconstruction conditions.

(2) **AGRICULTURAL LEVEES.** (a) Counties, cities and villages may permit agricultural levees which meet all applicable provisions of this subsection. For purposes of this section, an agricultural levee is one

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constructed to protect agricultural lands from lower floods (10-year frequency or more often).

(b) Agricultural levees shall be designed and constructed so that the levees will overtop upon the occurrence of the 10-year frequency flood.

(c) Increases in flood heights in the area upstream from agricultural levees shall not exceed 0.5 foot (15 cm.) for the 10-year frequency flood, based upon an assumption of equal degree of hydraulic encroachment on both sides of a river or stream for a reach. No increase is allowed unless the written consent of the affected property owners is obtained prior to construction.

(d) Agricultural levees shall be designed and constructed to be overtopped and to cause no increase during the occurrence of the regional flood.

(e) The zoning administrator shall notify the department of the construction of any agricultural levees.

(3) RESERVOIRS AND CHANNEL IMPROVEMENTS. No anticipated changes in the flood protection elevations or flood plain and floodway limits, based upon proposed reservoir or channel improvements, shall be effective until the reservoir or channel improvements are constructed and operative. If such improvements become inoperative or ineffective, the zoning regulations shall be amended to reflect the preconstruction conditions.

History: Cr. Register, July, 1977, No. 259, eff. 8-1-77.

**NR 116.18 Procedures for changing flood plain and floodway limits.** Counties, cities or villages shall not change the limits of the flood plain or the floodway without first amending the applicable portions of the water surface profiles, flood plain zoning maps and flood plain zoning ordinances and securing department approval to such amendments. The flood fringe designation on flood plain maps shall not be removed from any area unless it can be shown that the area has been filled to the flood protection elevation and is contiguous to other lands lying outside the flood plain.

History: Cr. Register, July, 1977, No. 259, eff. 8-1-77.

**NR 116.19 Appointment and duties of zoning administrator, zoning agency and board of adjustment/appeals.** (1) APPOINTMENT POWERS. Counties, cities and villages shall provide in their flood plain zoning ordinances for the appointment of appropriate boards and staff, and the development of necessary policies and procedures, to administer the flood plain zoning ordinance in accordance with this section. Where a zoning administrator, planning agency or a board of adjustment/appeals has already been appointed to administer a zoning ordinance adopted under sections 59.97, 59.971 or 62.23(7), Wis. Stats., these officials shall also administer the flood plain zoning ordinance.

(2) ZONING ADMINISTRATOR. A zoning administrator and such additional staff as needed shall be appointed and given the duties and powers to:

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(a) Advise applicants of the provisions of the flood plain zoning ordinance and provide assistance in preparing permit applications and appeals;

(b) Issue permits and inspect properties for compliance with the flood plain zoning ordinance;

(c) Keep the official records of all water surface profiles, flood plain zoning maps, flood plain zoning ordinances, nonconforming uses and changes thereto, permit applications, permits, appeals, variances and amendments related to the flood plain zoning ordinance;

(d) Submit copies of any required data, special exception permits, variances, amendments, case-by-case analyses, annual reports, and any other required information to the department. An annual summary showing only the number and types of zoning actions taken by the county, city or village shall be submitted to the department by the zoning administrator; and

(e) Investigate, prepare reports and report violations of the flood plain zoning ordinance to the appropriate county, city or village committee and to the municipal attorney, corporation counsel or district attorney, with copies to the appropriate department district office.

(3) ZONING AGENCY. A zoning agency or committee shall be appointed and given the duties and powers to:

(a) Oversee the functions of the office of the zoning administrator;

(b) Review and act upon all proposed amendments to the flood plain zoning ordinance;

(c) In some cases, a zoning committee may act in place of the board of adjustment/appeals, if so designated by the municipality, to hear and decide special exception permits (conditional uses). However, a zoning committee cannot act upon requests for a variance; and

(d) Maintain a complete public record of all its proceedings.

(4) BOARD OF ADJUSTMENT/APPEALS. A board of adjustment (in counties) or board of appeals (in cities and villages) shall be appointed and given the duties and powers in accordance with sections 59.99 and 62.23(7), Wis. Stats., to:

(a) Hear and decide appeals where there is an alleged error in any interpretation, order, requirement, decision, or determination made by the zoning administrator in the enforcement or administration of the flood plain zoning ordinance;

(b) Hear and decide all requested special exceptions (conditional uses) to the terms of the flood plain zoning ordinance, using the criteria found in section NR 116.21(3);

(c) Hear and decide all requested variances to the terms of the flood plain zoning ordinance;

(d) Maintain a complete public record of all its proceedings; and

(e) Make all of its decisions within a reasonable time and in the form of a written statement, resolution or order signed by the sec-

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retary. The zoning administrators shall not be the secretary of the board of adjustment/appeals.

History: Cr. Register, July, 1977, No. 259, eff. 8-1-77.

NR 116.20 County, city and village responsibilities. (1) JURISDICTION. The flood plain zoning ordinance shall require authorization (permits, special exceptions, variances and amendments) from the appropriate county, city or village for any of the following activities in flood plain areas:

- (a) Any new use or change in use of land or water.
- (b) Any new use or change in use of a structure or building.
- (c) The above activities include, but are not limited to, the following:
  1. Any structure or building or accessory use which is to be erected, constructed, reconstructed, altered or moved into the flood plain area;
  2. Any alteration, addition, modification, rebuilding or replacement of any existing structure or building or accessory use;
  3. Any deposition of materials for any purpose; and
  4. Any sanitary waste disposal or water supply facilities, both public and private.

(2) ADMINISTRATIVE PROCEDURES. The flood plain zoning ordinance shall establish administrative procedures for obtaining all required permits, special exceptions (conditional uses), variances, appeals and amendments. These procedures shall provide for the following:

(a) An application shall be made to the zoning administrator for all zoning permits, special exceptions (conditional uses), variances and amendments. The application shall include, but not be limited to, the information listed below.

1. The name and address of the applicant and property owner (s);
  2. The legal description of the property and the type of proposed use;
  3. A map plan which accurately locates or describes the proposal with respect to the floodway and flood plain, and which provides all pertinent information such as the fill, dimensions and elevations, building floor elevations, and flood proofing data; and
  4. For all subdivision proposals, and all other proposals if the area affected exceeds 5 acres or the estimated cost of the proposal exceeds \$75,000, the applicant shall provide all computations which are required to show the effect of the proposal on flood heights, velocities and flood plain storage. The county, city or village may transmit this data to the department for review.
- (b) In those instances where inadequate data exists and the conditions in subsection (2) (a) 4. above are not present, the county, city or village may transmit the above information to the department for a determination of flood protection elevations and for an evaluation of the effects of the proposal upon flood heights, velocities and flood plain storage. Additional information, such as valley cross sections or

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survey data, may be required by the department when needed to determine the effects of the proposal; this information shall then be obtained from the applicant by the county, city or village.

The department shall advise the county, city or village of its findings within 30 days after receiving the data, or within 30 days after receiving all requested additional information. Failure of the department to respond within 30 days may be construed to mean it has no comment.

(c) Public hearings shall be held by counties, cities or villages on all special exceptions (conditional uses), variances, appeals and amendments. Proper notice shall be given of such public hearings in accordance with appropriate statutes; mailed notice of such public hearings and a copy of the application shall be given to the department. Such notice shall specify the time and place of the hearing and give sufficient details concerning the subject matter of the public hearing.

(d) A copy of all decisions granting or denying a special exception (conditional use), variance or amendment to the flood plain zoning ordinance shall be mailed within 10 days to the department.

(3) CERTIFICATE OF COMPLIANCE. No vacant land in the flood plain, and no building hereafter erected, altered or moved into the flood plain, shall be occupied or used until the applicant obtains a certificate of compliance from the county, city or village. Counties, cities and villages may require that said certificate shall be issued only after the applicant has submitted to the local zoning administrator or building inspector a certification by a registered professional engineer or registered land surveyor that the following items were accomplished in compliance with the flood plain zoning ordinance:

- (a) The elevation of fill;
- (b) The elevation of the first floor; and
- (c) Any other technical information required by the county, city or village.

(4) ENFORCEMENT AND PENALTIES. Each flood plain zoning ordinance shall include a separate section establishing appropriate penalties for violations of various provisions of the ordinance. An appropriate penalty, as reflected in section 87.30(2), Wis. Stats., may include an injunction, abatement, removal and/or fine or forfeiture. Any violation of the provisions of the flood plain zoning ordinance shall be investigated and reported to the appropriate municipal attorney, corporation counsel or district attorney who shall expeditiously prosecute the violator.

(5) PUBLIC INFORMATION. (e) Where useful, marks on bridges or buildings or other markers may be set to show the depth of inundation during the regional flood at appropriate locations within the flood plain.

(b) All available information in the form of maps, engineering data and regulations should be readily available and widely distributed.

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(c) All legal descriptions of property in the flood plain should include information relative to the zoning classification when such property is transferred.

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NR 116.21 Permits, special exceptions (conditional uses), variances, appeals and amendments. (1) GENERAL. The flood plain zoning ordinance shall list the specific types of uses which may be authorized by permit, special exception (conditional use), variance or amendment, indicating the particular authorization required for each type of use. These authorizations shall not be contrary to the provisions of this chapter or other state law, or to applicable municipal ordinances.

(2) PARAGRAPHS. Counties, cities and villages shall issue permits for uses in flood plain areas which are in compliance with the applicable provisions for permitted uses in their flood plain zoning ordinances. These permits shall be issued by the zoning administrator.

(3) SPECIAL EXCEPTIONS (CONDITIONAL USES). Any use requiring a special exception (conditional use) permit may be allowed only upon application to the zoning administrator, public hearing and issuance of a special exception (conditional use) permit by the board of adjustment/appeals or, where appropriate, the zoning committee. When determining whether to grant or deny a special exception (conditional use) permit, the board of adjustment/appeals shall assure compliance of the proposal with:

- (a) The provisions of the flood plain zoning ordinance;
- (b) The purpose and objective of flood plain management, as enumerated in section NR 116.01; and
- (c) Local comprehensive plans and other land use controls.

(4) VARIANCES. Any prohibited deviation from the standards of the flood plain zoning ordinance, for which a permit has been denied by the zoning administrator, may be allowed only upon written request for a variance submitted to the zoning administrator, public hearing, and issuance of a variance by the board of adjustment/appeals. The board may authorize in specific cases such variance from the terms of the ordinance as will not be contrary to the public interest where, owing to special conditions and the adoption of the flood plain zoning ordinance, a literal enforcement of the provisions of the ordinance will result in unnecessary hardship. A variance:

- (a) Shall be consistent with the spirit of the flood plain zoning ordinance.
- (b) Shall not permit a lower degree of flood protection in the floodway area than the flood protection elevation.
- (c) Shall not be granted for a use that is common to a group of adjacent lots or premises. (In such a case, the zoning ordinance would have to be amended through proper procedures.)

(d) Shall not be granted unless it is shown that the variance will not be contrary to the public interest or damaging to the rights of other persons or property values in the area.

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(e) Shall not be granted for actions which require an amendment to the flood plain zoning ordinance as described in subsection (f) below.

(f) Shall not have the effect of granting or increasing a use of property which is prohibited in that zoning district by the flood plain zoning ordinance.

(g) Shall not be granted solely on the basis of economic gain or loss.

(h) Shall not be granted for a self-created hardship.

(5) APPEALS. Appeals to the board of adjustment/appeals may be taken by any party aggrieved by any decision of the zoning administrator. Requests for special exception (conditional use) permits may be considered as appeals. Such appeals shall specify the grounds thereof and be filed within a reasonable period of time with the zoning administrator. The flood plain zoning ordinance shall set forth the time limitations for filing appeals. The zoning administrator shall forthwith transmit to the board of adjustment/appeals all records of the matter concerning the appeal. After public hearing, the board's decision shall either affirm, reverse, vary or modify in whole or in part the order, requirement, decision, or determination appealed from. All appeal decisions must conform to the applicable provisions of the flood plain zoning ordinance. The board's decision may be appealed to the courts in accordance with applicable state law.

(6) AMENDMENTS. (a) Official amendments are required for any changes in the official floodway lines, water surface profiles, flood plain zoning maps or flood plain zoning ordinance. Actions which require an amendment by the county, city or village include, but are not limited to, the following:

1. Any change in the official floodway lines or in the boundary of the flood plain area;
2. Settlement of conflicts between the water surface profiles and flood plain zoning maps, in accordance with section NR 116.10;
3. Any fill or encroachment into the floodway which will result in raising the elevation of an area in the floodway to a height at or above the elevation of the regional flood;
4. Any fill or encroachment that will cause a change in the water surface profiles of the regional flood; and
5. Any upgrading of flood plain zoning ordinances in accordance with section NR 116.05.

(b) Amendments may be made upon petition of any interested party in accordance with the appropriate provisions of sections 59.97(3) and (4) and 62.23(7)(d), Wis. Stats.

(c) All proposed amendments shall be referred to the appropriate county, city or village zoning agency for a public hearing and recommendation to the governing body which shall approve or disapprove the proposed amendment.

(d) Amendments of official floodway lines shall meet the provisions of section NR 116.12.

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(e) No amendments to official floodway lines, water surface profiles, flood plain zoning maps or flood plain zoning ordinances shall become effective until they have been approved by the department.

History: Cr. Register, July, 1977, No. 259, eff. 8-1-77.

**NR 116.22 Department duties.** (1) ASSISTANCE TO COUNTIES, CITIES AND VILLAGES. The department shall provide assistance to counties, cities and villages in the development, adoption and administration of their official floodway lines, water surface profiles, flood plain zoning maps and flood plain zoning ordinances. Such assistance shall include, but not be limited to, the activities described below.

(a) The department shall establish and upgrade standards for local flood plain zoning ordinances.

(b) When requested by a county, city or village, the department shall evaluate flood hazards and the effects of proposals in flood plain areas upon water surface profiles, floodway limits and flood velocities as provided in section NR 116.20(2). Requests for such evaluations must come from a county, city or village, not from individual property owners or applicants.

(c) The department shall work with federal agencies to provide technical guidance and computer facilities for certain hydrologic, hydraulic and engineering studies. Generally, the necessary topographic and other base maps and field surveys will be the responsibility of the county, city or village.

(d) The department shall establish priorities for engineering studies to be done in counties, cities and villages by federal agencies.

(e) The department shall respond to the requests from counties, cities and villages to provide them assistance in enforcement actions against violations of their flood plain zoning ordinances.

(f) The department shall respond to requests from counties, cities and villages for assistance in developing hydraulic and official floodway lines.

(g) The department shall review all regional flood flow determinations. No such determination shall be used until department approval has been secured.

(2) REVIEW AND APPROVAL OF FLOOD PLAIN ZONING ORDINANCES. The department shall issue a certificate of approval to a county, city or village upon a finding that the adopted flood plain zoning ordinance meets the provisions of this chapter. The department review of flood plain zoning ordinances may include, but is not limited to, determinations that:

(a) The most accurate maps were utilized in delineating the flood plains;

(b) All flood plain zoning maps and flood plain zoning ordinances are compatible with all other shoreland regulations, existing zoning and land use plans;

(c) All water surface profiles, flood plain zoning maps and flood plain zoning ordinances are compatible with those of the adjoining communities on the same streams or rivers; and

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(d) The floodway and flood plain lines shown on the flood plain zoning maps are accurate.

(3) MONITORING. The department shall monitor the administration and enforcement of flood plain zoning ordinances in counties, cities and villages. In so doing, the department may:

(a) Establish and upgrade standards for the review and evaluation of the administration and enforcement of flood plain zoning ordinances.

(b) Review and approve or deny proposed amendments to water surface profiles, flood plain zoning maps and flood plain zoning ordinances.

(c) Review flood plain zoning permits, and all special exceptions (conditional uses), variances and amendments to flood plain zoning ordinances, to ensure in each instance compliance with the applicable flood plain zoning ordinances and this chapter.

(d) Review state and federal projects to assure that public works proposals in flood plain are compatible with local flood plain zoning ordinances and the provisions of this chapter.

(4) ENFORCEMENT. The department shall assist counties, cities and villages in achieving a consistent statewide approach to flood plain enforcement. This assistance may include, but is not limited to, the measures listed below.

(a) The department may request that corrective action be taken by the county, city or village where construction is occurring in a flood plain area which is either contrary to an existing flood plain zoning ordinance or which would be contrary to an approved flood plain zoning ordinance. Such corrective action may include, where appropriate, the following:

1. Active prosecution of violations of the flood plain zoning ordinance;

2. An injunction to stop construction until an adequate flood plain zoning ordinance can be adopted and approved by the department; and

3. Adoption of an adequate flood plain zoning ordinance and submittal to the department for approval.

(b) The department may seek an injunction to stop construction in the flood plain area until an adequate flood plain zoning ordinance is adopted and approved, when the construction would violate such an approved flood plain zoning ordinance.

(c) The department may seek adoption of an adequate flood plain zoning ordinance in accordance with the provisions of section 87.30(1), Wis. Stats.

(d) The department may seek an injunction, abatement, removal and/or fine for any violation of a flood plain zoning ordinance in accordance with section 87.30(2), Wis. Stats.

History: Cr. Register, July, 1977, No. 259, eff. 8-1-77.

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The following is the Model Floodplain Zoning Ordinance prepared by the DNR. The ordinance is designed to meet the requirements of section 87.30, Wisconsin Statutes. It can be used by counties, cities and villages to adopt flood protection provisions.

FLOODPLAIN ZONING ORDINANCE  
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FLOODPLAIN ZONING ORDINANCE  
For (City, County, Village) of \_\_\_\_\_, WISCONSIN

SECTION 1.0 STATUTORY AUTHORIZATION, FINDING OF FACT, STATEMENT OF PURPOSE AND TITLE

1.1 STATUTORY AUTHORIZATION: This zoning ordinance is adopted pursuant to the statutory authorization contained in Sections 61.35, 62.23, 59.97 or 59.971 and Section 87.30 of the Wisconsin Statutes.

**Note:** This section of the ordinance spells out the statutory authority for a municipality to adopt the ordinance. The floodplain zoning ordinance is designed to meet the requirements of Section 87.30, Wisconsin Statutes. Cities and villages are authorized by Sections 62.23 and 61.35, Wisconsin Statutes, respectively, to adopt local zoning ordinances. County zoning is authorized under Sections 59.97 and 59.971, Wisconsin Statutes.

1.2 FINDING OF FACT: Uncontrolled development and use of the floodplains, rivers or streams of the (city, county or village) of \_\_\_\_\_ would adversely affect the public health, safety, convenience, general welfare, and impair its tax base.

1.3 STATEMENT OF PURPOSE: The purpose of these rules is to provide a uniform basis for the preparation, implementation and administration of sound floodplain regulations for all floodplains within (the incorporated area of the village/city) (unincorporated areas of the county) to:

- 1.31 Protect life, health and property;
- 1.32 Minimize expenditures of public monies for costly flood control projects;
- 1.33 Minimize rescue and relief efforts, generally undertaken at the expense of the tax paying public;
- 1.34 Minimize business interruptions which usually result in the loss of local incomes;
- 1.35 Minimize damage to public facilities on the floodplains such as water mains, sewer lines, streets and bridges;
- 1.36 Minimize the occurrence of future flood blight areas on floodplains; and
- 1.37 Discourage the victimization of unwary land and home buyers.

**Note:** Section 1.3 states that the purpose and intent of these regulations is to reduce flood losses and describes in a very general manner the method by which the ordinance attempts to reduce those flood losses. The important thing to remember here is that the regulations and standards contained within the ordinance are not geared toward prohibiting all development but are intended to guide development so that it is protected from the effects of flooding.

1.4 TITLE: Floodplain Zoning Ordinance for the (City, County, Village) of \_\_\_\_\_, Wisconsin.

SECTION 2.0 GENERAL PROVISIONS

2.1 AREAS TO BE REGULATED: Areas regulated by this ordinance shall include all areas, within the (incorporated)(unincorporated) limits of the (city, county, village) of \_\_\_\_\_, Wisconsin, that would be covered by the "regional flood" as defined in Section 10.1(36).

2.2 DISTRICT BOUNDARIES: The boundary of the floodplain districts and where shown, the floodway and flood fringe districts, shall be those areas designated as floodplains on \* \_\_\_\_\_

This map dated \_\_\_\_\_ is the official floodplain zoning map for the community and has been approved by the Department of Natural Resources and the Federal Emergency Management Agency (FEMA), and is on file in the office of the (city, county, village) Clerk. If more than one map is referenced the most restrictive shall apply.

\* \* \* \* \*

\*NOTE, BEFORE ADOPTING THIS ORDINANCE CONTACT YOUR LOCAL DNR DISTRICT OR AREA OFFICE FOR CONCURRENCE ON THE MAP YOU INTEND TO ADOPT. Within Section 2.2, above, the most current and accurate floodplain map or engineering data available should be described. This may be a Flood Hazard Boundary Map, Flood Insurance Study Map, Flood Insurance Rate Map, Floodplain Information Report, Army Corps of Engineers Study Map, or other similar sources of floodplain mapping available in your community. (This note is for explanation only and should not be included within the official text of the ordinance.)

\* \* \* \* \*

**Note:** Sections 2.1 and 2.2 describe the areas to be regulated by the ordinance and defines the official floodplain zoning map(s) for the municipality. Section 2.2 should reflect the most current floodplain data available for the municipality. In municipalities where there has been no Flood Insurance Study conducted, the best available mapping information usually is the Flood Hazard Boundary Map (FHBM). The FHBM does not distinguish the floodway or flood fringe districts nor does it provide floodplain elevations. In municipalities where there has been a Flood Insurance Study or other detailed floodplain study conducted, elevations can be cross referenced on regional flood profiles contained within the study reports. The municipality will then have access to data that will assist them in determining what the flood elevations are for different areas within the floodplain.

2.21 ESTABLISHMENT OF DISTRICTS: The regional floodplain areas within the jurisdiction of this ordinance are hereby divided into three districts defined as follows:

- (a) The Floodway District (FW) consists of the channel of a river or stream and those portions of the floodplain adjoining the channel that are required to carry and discharge the regional flood waters.
- (b) The Flood Fringe District (FF) consists of that portion of the floodplain between the regional flood limits and the floodway.
- (c) The General Floodplain District (GFP) consists of all areas which have been or may be hereafter covered by flood water during the regional flood. It includes both the floodway and flood fringe districts.

**Note:** At this point, it is important to check the floodplain delineations on the official floodplain zoning map(s) described in Section 2.2. In areas where no engineering data is compiled, floodway and flood fringe limits must be determined to decide if the use can be permitted and what effect the development will have on flood heights and velocities. In areas that have had such data completed, the floodway and flood fringe will be delineated.

**2.22 LOCATING FLOODPLAIN BOUNDARIES:** Where an apparent discrepancy exists between the location of the outermost boundary of the flood fringe district or general floodplain district shown on the official floodplain zoning map and actual field conditions, the location of the district boundary line shall be initially determined by the zoning administrator using the criteria set forth in paragraphs (a) or (b). Where the zoning administrator finds that there is a significant difference between the district boundary shown on the map and the actual field conditions, the map shall be amended using the procedures established in Section 8.0. Disputes between the zoning administrator and an applicant on the location of the district boundary line shall be settled according to Section 7.33.

- (a) Where flood profiles exist, the location of the district boundary line shall be determined by the zoning administrator using both the scale appearing on the map and the elevations shown on the water surface profile of the regional flood. Where a discrepancy exists between the boundary line location shown on the map and the location indicated by the regional flood elevations and actual field conditions, the regional flood elevations shall govern. A map amendment is required where there is a significant discrepancy between the boundary line shown on the map and the location indicated by the regional flood elevations. The zoning administrator shall have the authority to immediately grant or deny a land use permit on the basis of a district boundary derived from the elevations shown on the water surface profile of the regional flood, whether or not a map amendment is required. The zoning administrator shall be responsible for initiating any map amendments required under this section within a reasonable period of time.
- (b) Where flood profiles do not exist, the location of the district boundary line shall be determined by the zoning administrator using the scale appearing on the map, visual on-site inspection and any available information provided by the Department. Where there is a significant difference between the district boundary line shown on the map and actual field conditions, the map shall be amended. Where a map amendment has been approved by both the (governing body) and the Department, the zoning administrator shall have the authority to grant or deny a land use permit.

**Note:** In cases where the mapped floodplain boundary lines appear to be in error, the zoning administrator may issue a land use permit if flood profiles exist and the flood elevations shown on the water surface profile for the regional flood indicate clearly that the land in question is above the regional flood elevation and is contiguous to land lying outside the regional floodplain. The zoning administrator may require a certified survey map or a statement signed by a registered land surveyor or licensed professional engineer to establish that the proposed development site is in fact above the regional flood elevation. The zoning administrator should record the correct boundary on a map other than the official floodplain zoning map, provide a copy of the change to the appropriate Department District Office, and initiate map amendment procedures. Each such map change may be handled separately or may be combined with other proposed text or map amendments, as long as the amendment process is started within a reasonable period of time.

When the applicant and the zoning administrator disagree on the location of a floodplain boundary line, the board of adjustment/appeal will be required to settle the dispute according to Section 7.33. If the board decides that the map needs to be changed, no permit may be issued and no work may be commenced until the map has been amended and the amendment has been approved by the Department.

2.23 REMOVAL OF LANDS FROM FLOODPLAIN: Compliance with the provisions of this ordinance shall not be grounds for removing lands from the floodplain district, unless they are removed by filling to a height of at least two feet above the regional flood elevation, the fill is contiguous to land lying outside the floodplain district, and the map is amended pursuant to Section 8.0. To remove the land from flood insurance requirements, FEMA must first revise the flood insurance rate map.

**Note:** Property owners who attempt to remove their land from the state floodplain regulation standards should be informed that they are not exempted from the National Flood Insurance Program (NFIP) requirements. In order for flood insurance not to be required, the map would have to be corrected or revised by FEMA. If the map is not corrected or revised by FEMA, the first floor of the structure would have to be above the regional flood elevation to be exempt from the flood insurance purchase requirements and then only after FEMA has issued a Letter of Map Amendment (LOMA). Depending on the area involved and the extent of the proposed development, the property owner should always be advised of the possible involvement and requirements of the NFIP.

2.3 COMPLIANCE: The use or development of any land or water, a change in the use of any land or water, and the use, change of use, construction, reconstruction, remodeling or expansion of any structure within the areas to be regulated by this ordinance shall be in compliance with the terms of this ordinance, and other applicable local, state and federal regulations.

2.4 GREATER RESTRICTIONS: Where a city, county or village zoning ordinance is more restrictive than the provisions contained in this ordinance, that ordinance shall continue in full force and effect to the extent of the greater restrictions, but not otherwise.

2.5: ABROGATION: This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or private deed restrictions. However, where this ordinance imposes greater restrictions, the provisions of this ordinance shall prevail.

2.6 INTERPRETATION: In their interpretation and application, the provisions of this ordinance shall be held to be minimum requirements liberally construed in favor of the governing body, and shall not be deemed a limitation on or repeal of any other powers granted by the Wisconsin Statutes. Where a provision of this ordinance is required by a standard in Chapter NR 116, Wisconsin Administrative Code, and where the meaning of the ordinance provision is unclear, the provision shall be interpreted in light of the chapter NR 116 standards in effect on the date of the adoption of this ordinance or in effect on the date of the most recent text amendment to this ordinance.

2.7 WARNING AND DISCLAIMER OF LIABILITY: The degree of flood protection provided by this ordinance is considered reasonable for regulatory purposes and is based on engineering experience and scientific methods of study. Larger floods may occur or the flood height may be increased by man-made or natural causes such as ice jams or bridge openings restricted by debris. Therefore, this ordinance does not imply that areas outside of the delineated floodplain or permitted land uses within the floodplain will be totally free from flooding and associated flood damages. Nor does this ordinance create liability on the part of, or a cause of action against, the (city, village, county) of \_\_\_\_\_ or any officer or employee thereof for any flood damage that may result from reliance on this ordinance.



**Note:** The warning and disclaimer of liability is included within this ordinance, to clarify the fact that floodplain studies are based, in part, upon engineering judgement and the best information available. Because of variations in engineering judgement and information available, two feet of freeboard above the regional flood elevation is required for all structural development within the floodplain.

2.8 SEVERABILITY: If any portion of this ordinance is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of this ordinance shall not be affected thereby.

2.9 GENERAL STANDARDS APPLICABLE TO ALL FLOODPLAIN DISTRICTS

2.91 (a) Except as provided in paragraph (b), no development shall be allowed in the floodplain which, acting in combination with existing or future similar works, will cause an increase equal to or greater than 0.1 foot (3 cm.) in the height of the regional flood or will adversely affect existing drainage courses or facilities.

(b) Increases equal to or greater than 0.1 foot (3 cm.) may be permitted, but only if amendments are made to this ordinance, the official floodplain zoning maps (including floodway lines) and water surface profiles in accordance with Section 8, and only if the total cumulative effect of the proposed development will not increase the height of the regional flood more than 1.0 foot for the affected hydraulic reach of the stream.

(c) For the purpose of this section, increases in the regional flood elevation shall be calculated:

1. Based upon an equal degree of hydraulic encroachment from the original hydraulic floodway lines for a hydraulic reach on both sides of the river or stream; and
2. Based upon an equal degree of hydrologic encroachment throughout a hydrologic reach of a river or stream to determine the volume of storage area which is lost.

**Note:** In section 2.91, the intent is to require that the impact of any development on other property owners is properly analyzed and accounted for before any development or ordinance amendments are allowed which will cause increases in the regional flood stage. Development, as defined in Section 10.1(9), includes virtually anything that is done within the floodplain. When one property owner proposes to narrow the floodway of a river or stream on one side, an engineering calculation must be made to determine the effect of narrowing the floodway an equal amount on the opposite side of the river, stream, or tributary for a length of stream known as a hydraulic reach. This factor is referred to as equal degree of hydraulic encroachment.

Since it is assumed that most uses in the flood fringe will not obstruct flood flows or cause increases in flood heights because of obstruction, structures or filling can be permitted, providing the standards within the flood fringe district are adhered to. For example large developments, such as shopping centers or large warehouses could increase flood heights by removing large areas of land from flood storage. Even small developments acting in combination with similar works may cause a downstream increase greater than 0.1 foot (3 cm.).

This is particularly true in smaller watersheds because the impact of storage loss is directly related to the percentage of total stream runoff which the loss of storage represents. Unlike floodway encroachments which cause an increase in upstream flood elevations, loss of storage will cause an increase in downstream elevations because less water will be stored, causing more water to rush downstream, thereby adversely affecting downstream property owners. When developments are proposed which may materially affect the storage capacity, an engineering study would have to be done applying an equal loss of storage uniformly throughout the hydrologic reach.

The reason for applying these standards is to offer equal opportunity for development to all property owners within both the hydraulic and hydrologic reach, while at the same time protecting the rights of all property owners that are adversely affected by an applicant's action. Section 8.22 requires easements to be obtained from those property owners that are adversely affected by increases in flood elevations of 0.1 foot or more before any such increase can be allowed.

Before increases to the regional flood stage may be allowed by a municipality, the affected unit of government must amend its water surface profiles, floodplain zoning maps, and zoning ordinances to reflect the increased flood elevations. Before the municipality can issue such an approval, appropriate legal arrangements must be made with the affected property owners and any affected local units of government for any increased flood elevations on those properties. (i.e., flooding easements must be acquired by the developer from those adversely affected.) Before becoming effective all maps and text amendments require the approval of the Department.

2.92 Owners or operators of all existing mobile home parks and mobile-home subdivisions located in the regional floodplain (in A-zones on flood hazard boundary maps or flood insurance study maps) shall file an evacuation plan, indicating alternate vehicular access and escape routes, including mobile home hauler routes, with the appropriate local disaster preparedness authorities, and shall provide for adequate surface drainage to minimize flood damage.

2.93 All mobile homes to be placed on a site located in the regional floodplain (in A-zones on flood hazard boundary maps or flood insurance study maps) shall be anchored so they do not float, collapse or move laterally during a flood. Such mobile homes shall be anchored according to the following specifications:

- (a) Over-the-top ties shall be provided at each of the four corners of the mobile home, with two additional ties per side at intermediate locations and mobile homes less than fifty (50) feet long shall require one additional tie per side;
- (b) Frame ties shall be provided at each corner of the mobile home with five (5) additional ties per side at intermediate points and mobile homes less than fifty (50) feet long requiring four (4) additional ties per side;
- (c) All components of the anchoring system shall be capable of carrying a force of 4,800 pounds; and
- (d) Any additions to the mobile home shall be similarly anchored.

- (e) The placement of all new mobile homes in addition to the standards listed above, must also meet the residential development standards in the floodfringe as found in Section 4.3.

**Note:** The standards addressed in Sections 2.92 and 2.93 are the minimum required NFIP development standards. Be aware that where municipalities prohibit the placement or replacement of mobile homes in flood prone areas, these standards can be modified to reflect the more restrictive development standards.

2.94 For all subdivision proposals, as "subdivision" is defined in Section 236.02(8), Wisconsin Statutes, and other proposed developments exceeding 5 acres in area or where the estimated cost of the proposed development exceeds \$75,000, the applicant shall provide all computations which are required to show the effects of the proposal on flood heights, velocities and floodplain storage. Further, the applicant shall provide within such proposals regional flood elevation data, and the means to provide adequate surface drainage and to minimize flood damage. In those instances where the applicant is not required to provide computations and where inadequate data exists, the available information may be transmitted to the Department of Natural Resources' District office for a determination of the flood protection elevations and for an evaluation of the effects of the proposal on flood heights, velocities and floodplain storage. Additional information, such as valley cross-sections or survey data may be required by the Department to determine the effects of the proposal. This information shall be obtained from the applicant or the applicant's agent by the (county, city, village). The provisions of Section 7.4 shall apply hereto. The applicant shall provide all data and calculations for any development which would require an amendment to the district boundaries or regional flood profiles.

**Note:** The National Flood Insurance Program (NFIP) requires that, "all subdivision proposals and other proposed new developments greater than 50 lots or 5 acres, whichever is the lesser, include within such proposals base flood elevation data." According to NR 116.20(2)(a)4., Wis. Adm. Code, the applicant is required to provide all computations for all subdivision proposals and all other proposals exceeding 5 acres in area or \$75,000 in value.

Section 236.02(8), Wis. Stats., defines "subdivision" as the division of a tract of land where five or more parcels or building sites of 1/2 acres each or less in area are created by a single division or by successive divisions within a period of five years.

When subdivision proposals and other proposed new development is planned in a flood-prone area FEMA standards require that (1) all such proposals are consistent with the need to minimize flood damage within the flood-prone area, (2) all public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage, and (3) adequate drainage is provided to reduce exposure to flood hazards.

2.95 Prior to any alteration or relocation of a watercourse, and prior to the issuance of any land use permit which may be required for the alteration or relocation of a watercourse, the (title of local zoning official or agency) shall notify adjacent municipalities, the appropriate district office of the Department of Natural Resources and the appropriate office of FEMA and shall require the applicant to secure all necessary state and federal permits. The flood carrying capacity within the altered or relocated portion of any watercourse shall be maintained.

2.96 Development which requires a permit from the Department of Natural Resources, pursuant to Chapters 30 and 31, Wisconsin Statutes, such as docks, piers, wharves, bridges, culverts, dams and navigational aids may be allowed provided the necessary (County, City or Village) permits are obtained and necessary amendments to the official floodway lines, water surface profiles, floodplain zoning maps or floodplain zoning ordinance, are made according to Section 8.0.

## SECTION 3.0 FLOODWAY DISTRICT (FW)

3.1 APPLICABILITY: The provisions of this section apply to all areas mapped as floodway on the official floodplain zoning maps, and to those portions of the general floodplain district determined to be floodway pursuant to the procedures contained in Section 7.4.

**Note:** The provisions contained within Section 3.1 apply to areas mapped as floodway and to the floodway portion of the general floodplain. In those areas where development is proposed within the general floodplain, local zoning officials must first determine if the proposed development is within the floodway or the flood fringe. Where it is evident that the development is proposed within the flood fringe, the submission of the information listed in Section 7.42(b) is not necessary. Where it is necessary to do a case-by-case analysis, the provisions contained within Section 7.42 will need to be followed.

3.2 PERMITTED USES: The following open space uses are allowed within the floodway district, and in the floodway portion of the general floodplain district, provided that they are not prohibited by any other ordinance, that the standards contained in Section 3.3 are met, and that all permits or certificates required under Section 7.18 have been issued:

- (a) Agricultural uses, such as: general farming, pasturing, outdoor plant nurseries, horticulture, viticulture, truck farming, forestry, sod farming and wild crop harvesting.
- (b) Nonstructural industrial and commercial uses, such as: loading areas, parking areas and airport landing strips.
- (c) Private and public recreational uses, such as: golf courses, tennis courts, driving ranges, archery ranges, picnic grounds, boat launching ramps, swimming areas, parks, wildlife and nature preserves, game farms, fish hatcheries, shooting preserves, target ranges, trap and skeet ranges, hunting and fishing areas, and hiking and horseback riding trails.
- (d) Uses or structures accessory to open space uses, or essential for historical areas, providing they are not in conflict with the provisions in Sections 3.3 and 3.4.
- (e) Extraction of sand, gravel or other materials.
- (f) Docks, piers or wharves, including docks, piers or wharves used as part of a marina, and other water related uses, such as dams, flowage areas, culverts, navigational aids and river crossings of transmission lines, and pipelines.
- (g) Public utilities, streets and bridges.

**Note:** It is important to remember that the uses "permitted" in Section 3.2 may or may not require a land use permit under Section 7.18(a). These uses are "permitted" in the sense that they are not prohibited. A land use permit is required if an activity meets the definition of development or if the use of an existing building or structure is changed. See Section 7.18. It is generally felt that these permitted floodway uses will not obstruct flood flows or be damaged by flood waters. In those cases where the permitted use will obstruct or cause an obstruction to flood flows, a determination will have to be made, as described in Section 2.94 of the ordinance, as to what effect the proposed development has on the floodway delineation and regional flood profiles. If that increase is greater than 0.1 foot (3 cm.), an amendment is required pursuant to Section 8.0.

3.21 All uses not listed as permitted uses in Section 3.2 are prohibited within the floodway district and in the floodway portion of the general floodplain district.

3.3 STANDARDS FOR DEVELOPMENTS IN FLOODWAY AREAS

3.31 GENERAL: Any development in floodway areas shall:

- (a) Meet all of the provisions of Section 2.9;
- (b) Not obstruct flood flows; and
- (c) Have a low flood damage potential.

3.32 STRUCTURES: Only structures which are accessory to permitted open space uses, or are essential for historical areas, may be allowed by permit, providing the structures meet all of the following criteria:

- (a) The structures are not designed for human habitation;
- (b) The structures are constructed and placed on the building site so as to offer minimum obstruction to the flow of flood waters. Whenever possible, structures shall be constructed with the longitudinal axis parallel to the direction of flow of flood waters, and shall be placed with their longitudinal axis approximately on the same line as those of adjoining structures;
- (c) The structures are firmly anchored to prevent them from floating away and restricting bridge openings or other restricted sections of the stream or river; and
- (d) The structures have all service facilities, such as electrical and heating equipment at or above the flood protection elevation for the particular area.

3.33 Public utilities, streets and bridges may be allowed by permit, provided that:

- (a) Adequate flood proofing measures are provided to the flood protection elevation;
- (b) Construction does not cause an increase of 0.1 foot or greater in the height of the regional flood, except that reasonable increases up to 1.0 foot may be approved if the amendment procedures and all conditions of Section 8.2 are met; and
- (c) The (county, city or village) amends its water surface profiles, floodplain zoning maps and floodplain zoning ordinance as needed, to reflect any changes resulting from such construction.

3.34 Fills or deposition of materials may be allowed by permit, provided that:

- (a) The requirements of Section 2.91 are met;
- (b) The fill or deposition of materials does not encroach on the channel area between the ordinary high water mark on each bank of the stream unless a permit has been granted by the Department of Natural Resources pursuant to Chapter 30, Wisconsin Statutes, and a permit pursuant to Section 404 of the Federal Water Pollution Control Act, Amendments of 1972, 33 U.S.C. 1334 has been issued, if applicable, and the other requirements of this section are met;

**Note:** The State and Federal permits referenced in paragraph (b) above require the municipality's zoning administrator to inform the applicant that such permits may be required in addition to the local permit when development occurs in adjacent wetlands or below the ordinary high-water mark of a navigable body of water. The Department permit can be applied for at its local area office and the Federal 404 permit can be applied for at the local office of the U.S. Army Corps of Engineers. If the location of the local Corps office is not known, the applicant or the zoning administrator should contact the local District office of the Department of Natural Resources for the necessary information.

- (c) The fill or other materials will be protected against erosion by riprap, vegetative cover, sheet piling or bulkheading sufficient to prevent erosion; and provided that
- (d) Such fills are not associated with private or public solid waste disposal.

**Note:** Section 3.3 lists the standards for development in floodway areas. Development is defined in Section 10.1(9) as "any manmade change to improved or unimproved real estate, including but not limited to the construction of buildings, structures or accessory structures...." It also includes such nonstructural activities as mining, dredging, filling, grading, paving, excavation or drilling operations or the deposition or extraction of materials. Structures designed for human habitation are expressly prohibited because of the high danger to human life due to higher velocities and increased depths of moving water within this District. In addition, any development would cause increases in flood depths upstream due to the obstructing effect development has on narrowing the floodway and in not allowing as much water to run downstream as fast as it did originally. Public utilities, streets and bridges must be floodproofed and should be designed so as to not cause an increase in flood heights. If increases are caused, then the provisions of Section 8.2 must be applied. Fill placed within this District must be protected against erosion and must not be placed in the channel unless all necessary state and federal permits have been obtained from both the Department and the U.S. Army Corps of Engineers.

3.35 The storage of any materials that are buoyant, flammable, explosive, or injurious to human, animal, plant, fish or other aquatic life is prohibited.

3.36 Any uses which are not in harmony with, or which may be detrimental to, the uses permitted in the adjoining districts are prohibited.

3.37 All private or public on-site sewage disposal systems are prohibited, with the exception of portable latrines that are removed during flooding, and systems associated with public recreational areas and Department approved campgrounds, that meet the applicable provisions of Chapter H 63, Wisconsin Administrative Code, which may be permitted in floodway areas.

3.38 All wells, whether public or private, which are used to obtain water for ultimate human consumption are prohibited.

3.39 All solid waste disposal sites, whether public or private are prohibited.

SECTION 4.0 FLOOD FRINGE DISTRICT (FF)

**Note:** The provisions contained within Section 4.0 apply to uses in the areas mapped as flood fringe and in the flood fringe portions of the general floodplain district. Since the flood fringe district does not contribute appreciably to the passage of flood water and has low depths and velocities, almost all uses are permitted if elevated to the flood protection elevation (which is a point 2 feet above the regional flood level).

Although the flood fringe district does not contribute appreciably to the passage of flood flows, the removal of large tracts of land needed for flood storage could increase flood elevations downstream. It is known that the filling in of all flood fringe areas within a watershed will cause a significant increase in flood levels and flood damages. However, for the purpose of minimum floodplain zoning standards in Chapter NR 116, Wisconsin Administrative Code, it was assumed that not enough fringe areas will be filled to cause a significant increase. Section 87.30, Wisconsin Statutes, and Chapter NR 116, Wisconsin Administrative Code, allow the local municipality to develop a more restrictive floodplain zoning ordinance keeping the entire flood fringe district in open space use if it so desires, which many Wisconsin municipalities have done. Such a model ordinance is available from the Department.

4.1 APPLICABILITY: The provisions of this section apply to all areas within the flood fringe district, as shown on the official floodplain zoning maps, and to those portions of the general floodplain district that are determined to be in the flood fringe area pursuant to Section 7.4.

4.2 PERMITTED USES: Any structures, land use, or development, including accessory structures and uses, are allowed within the flood fringe district and flood fringe portions of the general floodplain district, provided that the standards contained in Section 4.3 are met, that the use is not prohibited by this or any other ordinance or any other local, state or Federal regulation and that all permits or certificates required under Section 7.18 have been issued by the zoning administrator.

4.3 STANDARDS FOR DEVELOPMENT IN FLOOD FRINGE AREAS

4.31 All of the provisions of Section 2.9 shall apply hereto.

4.32 RESIDENTIAL USES: Any structure or building used for human habitation, which is to be erected, constructed, reconstructed, altered, or moved into the flood fringe area shall meet or exceed the following standards:

- (a) The lowest floor including the basement; except where paragraph (b) is applicable, shall be placed on fill at or above the flood protection elevation (which is a point two feet above the regional flood elevation). The fill elevation shall be one foot or more above the regional flood elevation and shall extend at such elevation at least 15 feet beyond the limits of any such structure or building erected thereon.

**Note:** Section 4.32 requires that all residential structures and buildings shall be elevated by filling. At least 15 feet of fill must extend beyond the structure. If less than 15 feet of fill is placed, the board of adjustment/appeals would have to grant a variance first. Fill is required because it provides structural safety by buffering against erosion and seepage of flood water and lessens the danger associated with rescue and relief operations by allowing a safe means of entering and exiting the structure. Fill should be of such a material that it will, when sufficiently compacted, retain its structural bearing capability under saturated conditions.

Constructing the lowest floor 2 feet above the regional flood elevation provides an additional margin of protection or safety. When flood studies are conducted, they assume a condition of free flow through bridges, culverts and other manmade or natural constrictions. No consideration is included for ice jams, debris accumulation, wave action, obstruction of bridge openings and floodways in these areas of constriction and as a result higher flood elevations can and do occur upstream.

- (b) The basement floor may be placed at the regional flood elevation providing it is flood proofed to the flood protection elevation. Where a communitywide exception allowing the flood proofing of basements has been granted by FEMA, the basement floor may be placed at an elevation lower than the regional flood elevation providing it is flood proofed to the flood protection elevation in compliance with Section 7.5. If a communitywide exception has not been granted by FEMA, requests to construct the basement floor below the regional flood elevation must be considered as a variance, thereby requiring action by the board of (adjustment/appeals) as specified in Section 7.34.
- (c) Except as provided in paragraph (d), contiguous dry-land access shall be provided from a structure or building to land which is outside of the floodplain, so that any such structure shall be accessible by rescue and relief vehicles during periods of regional flooding. Contiguous dry-land access means a road with a surface at or above the regional flood elevation and wide enough for rescue and relief vehicles.
- (d) In existing developments where existing streets or sewer lines are at elevations which make compliance with paragraph (c) impractical, the municipality may, after obtaining prior written Department approval, authorize access at an elevation lower than the regional flood elevation. Where the municipality has applied for and obtained Department approval, the zoning administrator shall issue a permit authorizing such access as is allowed under the Department approval.

**Note:** Section 4.32(b) allows the zoning administrator to issue permits for flood proofed basements below the flood protection elevation, providing that the top of the basement floor does not go beneath the regional flood elevation for the particular area. The elevations for the area being considered in the application can be obtained by reviewing the flood profiles associated with the flood study and corresponding maps described in Section 2.2. Where there has been no study and no flood elevations are available, a case-by-case analysis will need to be conducted to determine the regional flood elevation before the development can be permitted. FEMA has on occasion granted communitywide exceptions allowing a municipality to construct flood proofed basements below the regional flood elevation. Only three Wisconsin municipalities have received this federal exception. They are Brown County, the City of Green Bay, and the Village of Ashwaubenon within the floodplain of the East River. In all other municipalities, a variance hearing must first be held before a basement can be constructed below the regional flood elevation. The variance standards specified in Section 7.34 must also be met before such a variance may be granted.

Section 7.35 requires that the applicant be informed by the chairman of the board of adjustment/appeals that increased flood insurance premiums will ensue as a result of receiving a variance to build below the regional flood elevation. This notification is part of the National Flood Insurance Program (NFIP) requirements and is included to forewarn the applicant that flood insurance premiums will increase even though the structure may be flood proofed in



compliance with the standards specified under Wisconsin law. The applicant should be informed of this fact prior to the actual variance hearing to ensure that he/she is made aware that insurance premiums are associated with what the proposed lowest floor elevation is in comparison to the regional flood elevation. The more water that covers the site, the greater the amount of insurance. The least expensive flood insurance rates are for structures that have their lowest floor constructed 2 feet above the regional flood elevation.

4.33 ACCESSORY STRUCTURES OR USES: An accessory structure or use (not connected to a principal structure) shall meet all the applicable provisions of Section 3.31, 3.32 and 3.34. A lesser degree of protection, compatible with these criteria and the criteria in Section 4.34 may be permissible for an accessory structure or use providing that the site is not inundated to a depth greater than 2 feet or subjected to flood velocities greater than 4 feet per second upon the occurrence of the regional flood.

**Note:** Section 4.33 applies to an accessory structure or use that is not connected to the principle structure or use. It must be necessary to the principle use of the property, structure or building as is defined in Section 10.1(2). Section 4.33 allows only those accessory structures which are not associated with a high degree of flood damage potential to be constructed at a lower elevation. It should be remembered that all additions to residential and commercial structures must be flood proofed to the flood protection elevation.

Although most property owners will not need to borrow money to construct accessory structures, it must be noted that where a loan is necessary the property owner will be required by the lender to purchase flood insurance and will be required to pay insurance rates based upon the elevation of the structure's first floor. If the first floor of the accessory structure is constructed below the flood protection elevation, the insured will be required to pay higher flood insurance rates as compared with constructing the same structure at the flood protection elevation. Before construction occurs, the property owner should always be advised to check with his/her insurance agent to see at what elevation the most reasonable insurance rates occur.

4.34 COMMERCIAL USES: In commercial areas, any structure or building which is to be erected, constructed, reconstructed, altered or moved into the flood fringe area shall meet the requirements of Section 4.32. Storage yards, parking lots and other accessory land uses may be at lower elevations, subject to the requirements of Section 4.36. However, no such area in general use by the public shall be inundated to a depth greater than two feet or subjected to flood velocities greater than four feet per second upon the occurrence of the regional flood.

4.35 MANUFACTURING, AGRICULTURAL AND INDUSTRIAL USES: Any manufacturing, agricultural or industrial structure or building which is to be erected, constructed, reconstructed, altered or moved into the flood fringe area shall be protected to the flood protection elevation utilizing fill, levees, floodwalls, adequate flood proofing measures in accordance with Section 7.5, or any combination thereof. On streams or rivers having prolonged flood durations, greater protection may be required to minimize interference with normal plant operations. A lesser degree of protection, compatible with the criteria in Sections 4.34 and 4.36 may be permissible for storage yards, parking lots and other similar uses.

4.36 STORAGE OR PROCESSING OF MATERIALS: The storage or processing of materials that are buoyant, flammable, explosive, or which in times of flooding, could be injurious to human, animal, or plant life, shall be at or above the flood protection elevation for the particular area or flood proofed in compliance with Section 7.5. Adequate measures shall be taken to assure that said materials will not enter the river or stream during flooding.

4.37 PUBLIC UTILITIES, STREETS AND BRIDGES:

- (a) When failure or interruption of public utilities, streets and bridges would result in danger to the public health or safety or where such facilities are essential to the orderly functioning of the area, construction of and substantial improvements to such facilities may only be permitted if they are flood proofed, in compliance with Section 7.5, to the flood protection elevation; minor or auxiliary roads or nonessential utilities may be constructed at lower elevations providing they withstand flood forces to the regional flood elevation.
- b) Public utilities, streets and bridges in flood fringe areas should be designed to be compatible with the local comprehensive floodplain development plans.

4.38 SEWAGE SYSTEMS: All on-site sewage disposal systems shall be floodproofed to the flood protection elevation and shall meet the applicable provisions of all local ordinances and Chapters H 63 and H 65, Wisconsin Administrative Code.

4.39 WELLS: All wells, whether public or private, shall be floodproofed to the flood protection elevation, pursuant to Section 7.5, and shall meet the applicable provisions of Chapters NR 111 and NR 112, Wisconsin Administrative Code.

4.395 SOLID WASTE DISPOSAL SITES: All solid waste disposal sites, whether public or private, are prohibited in flood fringe areas.

SECTION 5.0 GENERAL FLOODPLAIN DISTRICT (GFP)

5.1 APPLICABILITY: The provisions for this district shall apply to all floodplains in the (city, village, county) for which "regional flood" data, as defined in Section 10.1(3) is not available, or where regional flood data is available but floodways have not been delineated. As adequate regional flood data becomes available and floodways are delineated for portions of this district, such portions shall be placed in the flood fringe district or floodway district, as appropriate.

5.2 PERMITTED USES: Those uses permitted in Sections 3.2, and 4.2 are allowed within the general floodplain district, provided that the procedures of Section 5.3 below are met, and all permits or certificates required under Section 7.18 have been issued by the zoning administrator.

**Note:** The general floodplain district applies to those areas where a floodway line and flood fringe districts are not delineated and where there are no detailed engineering studies depicting flood elevations or flood profiles. Because of this fact, all development within the general floodplain district, unless the site is clearly in the flood fringe district, must have a detailed analysis made to determine whether or not the development lies within the floodway district. Section 2.94 should be referred to along with its corresponding "note" which explains in part who is responsible for providing the information necessary to do the case-by-case analysis. The evaluation procedure is discussed in Section 7.4. If it is determined that the proposed use is located in the floodway the provisions of Section 3.0 would be applicable, and if it is in the flood fringe the provisions of Section 4.0 would be applicable.

In cases where it is determined that the delineation of the flood hazard zone is incorrect, the provisions of Section 2.22 may be followed. This allows the zoning administrator some latitude in making the determination as to the actual boundary of the flood hazard district. In those cases where it is evident that the area is incorrectly delineated, the map should be revised utilizing the assistance of the Department of Natural Resources' District Water Management Coordinator as specified in the "note" following Section 2.22.

5.3 STANDARDS FOR DEVELOPMENT IN THE GENERAL FLOODPLAIN DISTRICT: The general floodplain district encompasses both floodway and flood fringe areas. Therefore, a determination shall be made pursuant to Section 7.4, to determine whether the proposed use is located within a floodway or flood fringe area. If it is determined that a proposed use is located within a floodway, the provisions of Section 3.2 and 3.3 shall apply. If it is determined that the proposed use is located within the flood fringe, the provisions of Section 4.2 and 4.3 shall apply.

#### SECTION 6.0 NONCONFORMING USES

**Note:** Few municipalities within Wisconsin are completely free of existing development within their designated floodplain districts. It is assumed that there will be some uses and structures existing when the ordinance is adopted which are inconsistent with the provisions of the new ordinance. Existing uses such as this are referred to as nonconforming uses, and by Wisconsin law are allowed to be continued subject to certain restrictions. The provisions in this section of the ordinance are applicable to both the "nonconforming uses" and "nonconforming structures." A structure may be nonconforming although the use is conforming if it does not meet dimensional standards or was not constructed above, or flood proofed to, the flood protection elevation. The reverse may also be true where a residential structure is constructed to the flood protection elevation but is located in a floodway district where the use is not permitted.

6.1 GENERAL: Insofar as the standards in this section are not inconsistent with the provisions of Section (59.97(10) or 62.23(7)(h)), Wisconsin Statutes, they shall apply to all nonconforming uses and nonconforming structures. These regulations apply to the modification of, or addition to, any structure and to the use of any structure or premises which was lawful before the passage of this ordinance or any amendment thereto. The existing lawful use of a structure or building or its accessory use which is not in conformity with the provisions of this ordinance may be continued subject to the following conditions:

6.11 No modifications or additions to a nonconforming use or a nonconforming structure shall be permitted unless they are made in conformity with the provisions of this Section. For the purpose of this Section, the words "modification" and "addition" shall include, but not be limited to, any alteration, addition, modification, structural repair, rebuilding or replacement of any such existing use, structure or accessory structure or use. Ordinary maintenance repairs are not considered modifications or additions; such ordinary maintenance repairs include internal and external painting, decorating, paneling and the replacement of doors, windows and other nonstructural components;

**Note:** The provisions contained within Section 6.11 define modification and addition in comparison to ordinary maintenance repair. The zoning administrator should notice that ordinary maintenance repairs are not considered to be additions or modifications, but, simply

a means to maintain the structure or use in a manner necessary for continued use. It should be remembered that municipalities can adopt ordinances that have more restrictive nonconforming use provisions and as a result may not wish to allow ordinary maintenance repairs to occur without the issuance of a zoning permit, and may wish to reflect those improvements as part of the total modification or addition referred to within this section.

6.12 If a nonconforming use is discontinued for 12 consecutive months, it is no longer permitted and any future use of the property, and any structure or building thereon, shall be made to conform to the applicable requirements of this ordinance;

**Note:** Section 6.12 provides for the termination of nonconforming uses after a specific period of discontinued use. The local zoning enabling authority under Section 62.23(7)(h) for cities and villages, and Section 59.97(10) for counties, Wisconsin Statutes, provides that if a nonconforming use is discontinued for a period of more than 12 months, any future use shall conform to the ordinance.

6.13 As requests are received for modifications or additions to nonconforming uses or nonconforming structures in the floodway, a record shall be kept which lists the nonconforming uses and nonconforming structures, their present equalized assessed value, and the cost of those additions or modifications which have been permitted; and

**Note:** The purpose of Section 6.13 is to maintain a record of all existing nonconforming uses and nonconforming structures along with their present equalized assessed value and the costs of the improvements which have been made. It is not the intent of this ordinance to also include the cost of ordinary maintenance repairs as defined in 6.11 above. This record may be kept separately apart from the permits, or the information may be attached to the nonconforming use permit when it is issued. A continuous record is necessary to show when and at what time a nonconforming structure exceeds the dollar limitations contained in 6.21(c) below.

6.14 No modification or addition to any nonconforming structure or any structure with a nonconforming use, which over the life of the structure would exceed fifty percent (50%) of its present equalized assessed value, shall be allowed unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this ordinance and contiguous dry land access is provided in compliance with Section 4.32(c) or Section 4.32(d).

**Note:** Section 6.14 places limitations on the modification, expansion and rebuilding of nonconforming uses and structures and where these limitations are exceeded, the modification; expansion or rebuilding is not permitted nor can it be allowed. In cities or villages, the nonconforming use provisions contained within Section 62.23(7)(h), Wisconsin Statutes, do not give discretion to the city or village where the total cost to restore the structure would exceed 50% of its present equalized excess value. However, Section 59.97(10), Wisconsin Statutes, provides that a County may allow the structure to be rebuilt. Chapter NR 116 requires, however, that it be flood proofed, to the flood protection elevation, by means other than fill, and dryland access must be provided in accordance with Section 4.32 of this ordinance. Should further explanation concerning this particular section of the ordinance be needed, you should contact your local Department of Natural Resources District Water Management Coordinator.

## 6.2 FLOODWAY AREAS

**Note:** Because of the increased hazards associated with the location of existing nonconforming uses and nonconforming structures in a floodway area, specific nonconforming use provisions are included for both the floodway and flood fringe districts. Section 6.2 contains the criteria for modifications or additions to nonconforming floodway uses and structures. The restrictions placed on such existing development will be more restrictive than those contained within the flood fringe nonconforming use provisions. Only in cases of extreme hardship or practical difficulty can such structures or uses be maintained beyond what is considered to be 50% of the present equalized assessed value of the structure. Modifications or additions in excess of this limit would, in a sense, be a variance to the nonconforming use provisions, and as a result, the property owner would need to be informed that increased flood insurance premiums may result for the entire structure if substantial improvement, greater than 50% of its present equalized assessed value occurs.

6.21 No modification or addition shall be allowed to any nonconforming structure or any structure with a nonconforming use in a floodway area, unless such modification or addition has been granted a permit or variance and meets all of the following criteria:

- (a) The modification or addition to the existing structure will not increase the amount of obstruction to flood flows as provided in Section 2.91;
- (b) Any addition to the existing structure shall be floodproofed, pursuant to Section 7.5, by means other than the use of fill, to the flood protection elevation; and
- (c) If any nonconforming structure or any structure with a nonconforming use is destroyed or is so badly damaged that it cannot be practically restored, it cannot be replaced, reconstructed or rebuilt unless the provisions of Section 3.0 are met. For the purpose of this subsection, restoration is deemed impractical where the total cost of such restoration would exceed 50% of the present equalized assessed value of the structure.

6.22 No new on-site sewage disposal system, or addition to an existing on-site sewage disposal system, except where an addition has been ordered by a government agency to correct a hazard to public health, shall be allowed in a floodway area. Any replacement, repair or maintenance of an existing on-site sewage disposal system in a floodway area shall meet the applicable requirements of all land ordinances and Chapter H 63, Wisconsin Administrative Code.

6.23 No new well or modification to an existing well, used to obtain water for ultimate human consumption, shall be allowed in a floodway area. Any replacement, repair or maintenance of an existing well in a floodway area shall meet the applicable requirements of this ordinance and Chapters NR 111 and NR 112, Wisconsin Administrative Code.

**Note:** It can be concluded that no new on-site sewage disposal system, or private water supply system is allowed within the floodway district. Replacement of failing existing systems may be allowed providing they are replaced with flood proofed holding tanks or mound systems in compliance with Chapter H 63 of the Wisconsin Administrative Code.

### 6.3 FLOOD FRINGE AREAS

6.31 No modification or addition shall be allowed to any nonconforming structure or any structure with a nonconforming use in the flood fringe area unless such modification or addition has been granted a permit or variance and, except where Section 6.32 is applicable, the modification or addition is placed on fill or is flood proofed to the flood protection elevation in compliance with the applicable regulations for that particular use in a flood fringe area as contained in Section 4.3.

**Note:** Section 6.31 contains the general criteria for modifications or additions to nonconforming uses and structures in flood fringe areas, but the cost limitations imposed by Section 6.14, applicable to additions or modifications in excess of 50% of present equalized assessed value, must also be applied. Where Section 6.14 is applicable in the flood fringe, the entire structure must be floodproofed or placed on fill. The cost limitations placed on modifications and additions to nonconforming flood fringe structures is a minimum requirement of the National Flood Insurance Program (NFIP) and must be included for a municipality to meet the flood insurance eligibility standards for participation in the NFIP.

6.32 Where compliance with the provisions of Section 6.31 would result in unnecessary hardship, and only where the structure will not be used for human habitation or be associated with a high flood damage potential, the board of (adjustment/appeals), using the procedures established in Section 7.3, may grant a variance from those provisions, using the criteria listed below. Modifications or additions which are protected to elevations lower than the flood protection elevation may be permitted if:

- (a) Human lives are not endangered;
- (b) Public facilities, such as water or sewer, are not to be installed;
- (c) Flood depths will not exceed four feet;
- (d) Flood velocities will not exceed two feet per second; and
- (e) The structure will not be used for storage of materials described in Section 4.35.

**Note:** Section 6.32 provides the board of adjustment/appeals with the standards they must adhere to in deciding whether or not to allow variances from the provisions contained in Section 4.3. It must be remembered that where a variance such as this is granted, the board must also inform the property owner in writing, signed by either the board chairman or its secretary, that increased flood insurance premiums may result.

6.33 All new on-site sewage disposal system, or addition to, replacement, repair or maintenance of an on-site sewage disposal system, in a flood fringe area shall meet all the applicable provisions of all local ordinances and Chapters H 63 and H 65, Wisconsin Administrative Code.

6.34 All new well, or addition to, replacement, repair or maintenance of a well, in a flood fringe area shall meet the applicable provisions of this ordinance and Chapters NR 111 and NR 112, Wisconsin Administrative Code.

SECTION 7.0 ADMINISTRATION

This Section provides for the appointment of appropriate boards and staff, and the development of necessary policies and procedures, to administer this ordinance, in accordance with this section. Where a zoning administrator, planning agency or a board of (adjustment/appeals) has already been appointed to administer a zoning ordinance adopted under section(s) (59.97, 59.971 or 62.23(7)), Wisconsin Statutes, these officials shall also administer this ordinance.

**Note:** Chapter 4 of the Floodplain-Shoreland Management Guide manual should be referred to for an explanation of the duties, functions, and responsibilities of the zoning administrator, board of adjustment/appeals and zoning agency.

7.1 ZONING ADMINISTRATOR: The zoning administrator is hereby authorized to administer the provisions of this ordinance. The zoning administrator shall have the following duties and powers:

7.11 Advise applicants of the provisions of this ordinance; assist them in preparing permit applications and appeals, and insure that the regional flood elevation for the proposed development is shown on all permit applications.

**Note:** Section 7.11 directs the zoning administrator to assist applicants in preparing both their permit applications and, in cases where the application is not granted and the applicant desires to appeal, to assist them in filling out the appeal form which is submitted to the board of adjustment/appeals for either a variance or an interpretation. It must be stressed that when an application for a permit is made, the zoning administrator must inform the applicant in writing as to why a permit is denied. The administrator cannot simply tell the individual, rather, it must be stated in writing, providing of course, that the application has also been completed in writing by the applicant.

7.12 Issue permits and inspect properties for compliance with provisions of this ordinance and issue certificates of compliance where appropriate.

7.13 Keep the official records of all water surface profiles, floodplain zoning maps, floodplain zoning ordinances, nonconforming uses and nonconforming structures and changes thereto, permit applications, permits, appeals, variances and ordinance amendments related to this ordinance.

7.14 Submit copies of all decisions granting or denying variances and appeals, all map and text amendments, case-by-case analyses, annual reports, and any other required information to the appropriate District Office of the Department of Natural Resources. An annual summary showing only the number and types of all floodplain zoning actions taken by the (county, city or village) shall also be submitted to the Department by the zoning administrator.

**Note:** Section 7.14 requires the zoning administrator to submit copies of any actions taken on variances, amendments, case-by-case analysis, annual reports and any other required information to be submitted to the appropriate District Office of the Department for their review and response. This is especially important in cases where the ordinance text or map is being amended and in cases requiring variances from the flood protection elevation or development standards as specified within the ordinance. In cases where assistance is needed or requested, the local Department district office should be contacted in addition to submitting the information to them for their review.

7.15 Investigate and report violations of this ordinance to the appropriate (county, city or village) zoning committee. The zoning committee shall submit its recommendations on each violation to the (municipal attorney, corporation counsel or district attorney) for prosecution. Copies of the violation reports shall also be sent to the appropriate District office of the Department.

**Note:** There is no single correct procedure established for investigating or preparing reports and reporting violations of floodplain zoning provisions. But it should be remembered that in order to effectively enforce and prosecute a violation, the prosecutor will need a case record of all the information concerning the violation, including such things as photographs, written testimony, taped testimony, other records of any hearings held concerning the subject of the violation and any other pertinent information which can be obtained. The zoning administrator cannot be too careful or too meticulous in preparing materials which may eventually be used in an enforcement action.

7.16 Submit copies of text amendments and annual reports to FEMA.

7.17 Maintain on file a list of all documentations of certified elevations.

**Note:** The purpose of maintaining a list of certified ground surface elevations is to provide a benchmark source for future developers to use when determining if their building floor and ground surface elevations are in compliance with the elevation standards contained in this ordinance.

7.18 ADMINISTRATIVE PROCEDURES:

- (a) LAND USE PERMIT: A land use permit shall be obtained from the zoning administrator before any new development, as "development" is defined in Section 10.1(9), or any change in the use of an existing building or structure may be initiated. Application for a permit shall be made to the zoning administrator upon furnished application forms and shall include, for the purpose of proper enforcement of these regulations, the following data:
1. Name and address of the applicant, property owner and contractor - builder;
  2. Legal description of the property, including the type of proposed use, and an indication as to whether new construction or a modification to an existing structure is involved;
  3. The elevation of the lowest floor using National Geodetic and Vertical Datum (NGVD);
  4. A site development plan which accurately locates or describes the proposal with respect to the floodway and flood fringe districts showing the dimensions of the lot and locations of all existing and proposed structures from lot lines, center lines of all abutting highways, and the ordinary high-water mark of any abutting or nearby watercourses; and
  5. Information concerning all private water supply systems and on-site sewage disposal systems to be installed, the location of all existing wells, structures, and on-site sewage disposal systems, and the ordinary high-water mark of all streams and lakes within 100 feet of a proposed sewage disposal site.



6. Data sufficient to determine the regional flood elevation at the location of the development and to determine whether or not the requirements of Section 2.9 are met. This may include any of the information noted in Section 7.42.

**Note:** Section 7.18(a) addresses the permit application information that must be submitted by the applicant before the permit may be issued. Sample permit application forms are included within the floodplain-shoreland guide manual. An important question to be answered on the application is the floodplain zoning district classification. Is it floodway or flood fringe? In situations where the site is not classified, a case-by-case analysis will need to be made to determine whether or not the structure is in a floodway or flood fringe and precisely what the flood elevation is, so that the structure can be adequately protected from flooding.

Section 7.18(a)4. requires the elevation of the lowest floor to be given in terms of the National Geodetic and Vertical Datum (NGVD). This gives the zoning administrator the ability to compare that elevation with the flood profile, usually given in NGVD, without having to make a conversion to a local or assumed datum.

Although there are listed permitted uses within Sections 3 and 4, if an activity is undertaken which requires a permit under Section 7.18(a), a permit must be applied for and issued in order for such a use to be allowed. If no permit is issued, the applicant would be in violation of the ordinance in that a permit was never obtained, even though the use and the construction of the structure may be in compliance with the development standards contained in the ordinance.

- (b) **CERTIFICATE OF COMPLIANCE:** No vacant or developed land shall be occupied in the floodplain, and no building or structure hereafter erected, altered or moved into the floodplain shall be occupied or used, until the applicant obtains a certificate of compliance from the zoning administrator. The zoning administrator shall issue a certificate only after the applicant has submitted a certification signed by a registered professional engineer or registered land surveyor that the fill and lowest/basement floor elevations were placed in compliance with the development standards contained in this ordinance. If flood proofing is required pursuant to Section 7.5, the zoning administrator shall issue a certificate only after the applicant has submitted a certification signed by a registered professional engineer or architect that the structure is adequately constructed to comply with the provisions of Section 7.5.

**Note:** Section 7.18(b) refers to certificates of compliance. The intent of these certificates is to ensure the applicant that the use the applicant is intending is in conformance with the provisions of this ordinance. It also requires that before such a certificate can be issued, the zoning administrator must receive certification signed by either a registered professional engineer or surveyor that fill and the elevation of the lowest floor are in compliance with the flood fringe development standards found in Section 4 or was properly flood proofed in compliance with Section 7.5. Without certification from a registered engineer or land surveyor, the zoning administrator might be held responsible if the structure is later found not to be constructed above the flood protection elevation or does not withstand flooding without structural failure.

- (c) **OTHER PERMITS:** It is the responsibility of the applicant to secure all other necessary permits from all appropriate federal, state, and local agencies, including those required by the U.S. Army Corps of Engineers under Section 404 of the Federal Water Pollution Control Act amendments of 1972, 33 U.S.C. 1334.

**Note:** Section 7.18(c) states that the applicant is responsible to secure all other necessary permits from all appropriate federal, state and local agencies, including obtaining permission from the U.S. Army Corps of Engineers for all development below or within the navigable portion of all bodies of water. The applicant should be advised by the zoning administrator to contact the local office of the U.S. Army Corps of Engineers for the necessary federal permit before the municipality issues a permit. Permits from the state, under Chapters 30 and 31, Wisconsin Statutes, are obtained from the local DNR district or area office.

7.2 ZONING AGENCY: The zoning (agency or committee) shall have the following duties and powers to:

- (a) Oversee the functions of the office of the zoning administrator;
- (b) Review and act upon all proposed amendments to the floodplain zoning ordinance map and text; and
- (c) Maintain a complete public record of all its proceedings.

**Note:** The name of the zoning agency will vary from municipality to municipality. In counties, this particular committee is referred to most often as the ag and zoning committee, the park and planning commission, or the planning and zoning commission. Within cities and villages, the names vary from planning commission, zoning committee, to zoning and public works committee, to name a few. In many villages, the board of trustees also serves as the planning or zoning agency. It is permissible for both a county board of supervisors and a city council to hold hearings and take direct action on zoning map and text amendments. Within Sections 59.97 and 62.23, Wisconsin Statutes, the required procedure is to refer the matter from the governing body to the committee responsible for the zoning functions (generally the zoning committee or agency) and they in turn hold the public hearing, take testimony and record findings of fact and make a recommendation to the governing body for final action. See Section 8.2 and the explanations given within it, as to the procedures to follow when processing a petition for a map or text amendment.

7.3 BOARD OF (ADJUSTMENT/APEALS): The appropriate board created under Section (59.99, for counties) (62.23(7)(e), for cities or villages), Wisconsin Statutes, is hereby authorized to act as the (board of adjustment in counties) (board of appeals in cities or villages) for the purposes of this ordinance. The Board of (Adjustment/Appeals) shall exercise the powers conferred by Section (59.99(7) or 62.23(7)(e), Wisconsin Statutes.

7.31 APPEALS TO THE BOARD: Appeals to the board of (adjustment/appeals) may be taken by any person aggrieved or by any officer, department, board or bureau of the municipality affected by any decision of the zoning administrator or other administrative officer. Such appeal shall be taken within a reasonable time, as provided by the rules of the board, by filing with the zoning administrator and with the board of (adjustment/appeals) a notice of appeal specifying whether an interpretation of the ordinance text or map or a variance is sought and the grounds thereof. The zoning administrator or other officer from whom the appeal is taken shall transmit to the board all the papers constituting the record upon which the action appealed from was taken.

**Note:** Under Section 59.99(3), Wis. Stats., the county board of supervisors is required to adopt rules for the conduct of board of adjustment meetings. Within cities and villages, under Section 62.23(7)(e)3, Wis. Stats., the Board of Appeals itself is required to adopt rules for its meetings.

Section 7.3 establishes the board of adjustment/appeals as the board to which persons may appeal who are upset by the interpretation by the ordinance or feel that the regulations and requirements are too strict and feel they can demonstrate hardship and practical difficulty and thereby be allowed to deviate from the development standards contained. The board of adjustment/appeals has two primary functions in this regard: (1) Under its power of administrative review, it can interpret the meaning of the ordinance and provisions contained within it as well as the location of district boundaries in the case of dispute; and 2) It is the agency designated by statute to issue variances to provide relief from the strict requirements of the ordinance. Before the board can grant a variance from the provisions of the ordinance, it must be clearly demonstrated, and defined within the minutes of their meeting, or in the board's written decision, how the decision was made and in what specific way hardship or practical difficulty was shown. (Refer to the legal Summary Section within the floodplain-shoreland manual for a discussion of what legally constitutes unnecessary hardships.) In some ordinances, the board is also authorized to issue special exception (conditional use) permits. In this particular ordinance special exception permits have not been provided for and thus, the board need not consider such applications.

Both the board of adjustment/appeals and the zoning agency can as mentioned to above, have additional duties and functions and may be the agency responsible for hearing appeals concerning other ordinances. This is permissible. It must be remembered that this particular ordinance may be more restrictive than the standards in many of the underlying land use zoning ordinances. The most restrictive provisions contained in each ordinance must always be applied.

7.32 HEARING APPEALS:

- (a) The board of (adjustment/appeals) shall fix a reasonable time for the hearing of the appeal and shall publish a class 2 notice pursuant to Chapter 985, Wisconsin Statutes, specifying the date, time, place and subject of the hearing. The hearing notice shall be mailed to the parties in interest in advance of the hearing.
- (b) A decision regarding the appeal shall be made within a reasonable time.
- (c) The final decision on an appeal to the board of (adjustment/appeals) shall be in the form of a written determination signed by the chairman or secretary of the board. The determination shall state the specific facts, which are the basis for the Board's decision and shall either affirm, reverse, vary or modify the order, requirement, decision or determination appealed, in whole or in part, deny the appeal for lack of justification or grant or deny the application for a variance. The reasons or justifications for granting an appeal including a description of the hardship or practical difficulty which was demonstrated by the applicant in the case of a variance, shall be clearly stated in the recorded minutes of the board of (adjustment/appeals) proceedings.
- (d) A copy of all decisions by the board of (adjustment/appeals) shall be mailed to the appropriate District Office of the Department.

**Note:** Section 7.32 establishes the procedures to be followed by the board in considering appeals from decisions made by the zoning administrator. It should be noted within the final decision, which is rendered by the Board, that the applicant may also appeal the board's

decision to a court of record, should the applicant feel aggrieved by the decision rendered by the board. Failure to follow the correct zoning appeal procedure may result in the dismissal of an action taken against the municipality, the zoning administrator, or the board of adjustment/appeals.

7.33 BOUNDARY DISPUTES: The following procedure shall be used by the board of (adjustment/appeals) in hearing disputes concerning the district boundaries shown on the official floodplain zoning map:

- (a) Where a floodplain district boundary is established by approximate or detailed floodplain studies, pursuant to Section 2.2, the regional flood elevations or profiles for the point in question shall be the governing factor in locating the district boundary. If no regional flood elevations or profiles are available to the board, other available evidence may be examined.
- (b) In all cases, the person contesting the location of the district boundary shall be given a reasonable opportunity to present arguments and technical evidence to the board of (adjustment/appeals). Where it is determined that the district boundary is incorrectly mapped, the board should either inform the (zoning committee) to proceed to petition the (governing body) or inform the person contesting the location of the boundary to petition the (governing body), for a map amendment pursuant to Section 8.2.

**Note:** Section 7.33 establishes the procedure to be followed in cases of boundary dispute. It should always be remembered that where there are flood elevations available, those elevations are the governing factor. It is the responsibility of the applicant or developer to submit information indicating the elevation of the property to be developed and to provide cross sections showing where that elevation appears on the flood profile. A determination can then be rendered by the zoning administrator. In cases where it is demonstrated that the map boundaries are in error, the board of adjustment/appeals should direct the applicant or the zoning agency to petition the governing body for a zoning map amendment. When the map amendment action is commenced, both the Department and FEMA should be informed. Please refer to the amendment procedure section contained within Chapter 4 of the floodplain-shoreland management guide manual.

7.34 VARIANCE: Any deviation from the standards of this ordinance, for which a permit has been denied by the zoning administrator, may be allowed only upon written request for a variance submitted to the zoning administrator, after a public hearing and the issuance of a variance by the board of (adjustment/appeals). The Board may authorize in specific cases such variance from the terms of the ordinance as will not be contrary to the public interest where, owing to special conditions affecting a particular property, a literal enforcement of the provisions of this ordinance would result in unnecessary hardship as defined in Section 10.1(40). A variance:

- (a) Shall be consistent with the spirit and purpose of this ordinance as stated in Section 1.3.
- (b) Shall not permit a lower degree of flood protection in the floodway area than the flood protection elevation, as defined in Section 10.1(21). In the flood fringe area, a lower degree of flood protection than the flood protection elevation may only be allowed pursuant to Section 6.32.
- (c) Shall not be granted because of conditions that are common to a group of adjacent lots or premises. (In such a case, the zoning ordinance would have to be amended following proper procedures.)

- (d) Shall not be granted unless it is shown that the variance will not be contrary to the public interest and will not be damaging to the rights of other persons or property values in the area.
- (e) Shall not be granted for actions which require an amendment to this ordinance or the map(s) described in Section 2.2.
- (f) Shall not have the effect of granting or increasing a use of property which is prohibited in a particular zoning district.
- (g) Shall not be granted solely on the basis of economic gain or loss.
- (h) Shall not be granted for a self-created hardship.

**Note:** Section 7.34 establishes the variance standards which must be met when granting a variance. Under Section 7.34(f), the board of adjustment/appeals cannot grant a use variance (i.e., grant a permit for a residential use in the floodway district). Such an action would require an amendment to either the text or to the map before such a permit could be acted on. Section 7.34(b) specifically states that a lower degree of flood protection than the flood protection elevation is not permitted in the floodway area. In other words, no variance from the flood protection elevation is possible in the floodway area primarily due to the danger to human life, health and property. Variances to the flood protection elevation within the flood fringe area may be permissible only if the standards contained within section 6.32 are adhered to.

7.35 When a variance is granted the applicant shall be notified in writing, by the chairman or secretary of the board of (adjustment/appeals), that increased flood insurance premiums may result. A copy of this notification shall be maintained with the variance appeal record.

**Note:** Section 7.35 requires that when a variance is granted, the applicant is to be informed in writing that increased flood insurance premiums may result. It is important that a copy of that statement be attached to the file as a permanent record should there be some question later as to whether or not the applicant was informed or when the applicant completes construction and finds out that the insurance premiums are prohibitively expensive. In most instances, the zoning administrator should either inform the applicant of this fact before the applicant appeals to the board of adjustment/appeals or should advise the applicant to contact his/her insurance agent to find the most cost-effective elevation to build to. It must be remembered that the National Flood Insurance Program standards do not recognize flood proofed structures in cases where the municipality does not receive a communitywide exception. Please refer to the note following section 4.32(d) for further explanation as to what a communitywide exception is.

#### 7.4 PROCEDURES FOR DETERMINING FLOODWAY AND FLOOD FRINGE LIMITS:

7.41 APPLICABILITY: When any development is proposed within the general floodplain district, a determination shall be made to establish the boundaries of the floodway, to allow the zoning administrator to determine whether floodway or flood fringe uses apply, and, where required, to determine the regional flood elevation.

7.42 Upon receiving an application for development within the general floodplain district, the zoning administrator shall:

- (a) Require the applicant to submit, at the time of application, two copies of an aerial photograph, or a plan which accurately locates the proposed development with respect to the general floodplain district limits, channel of stream, existing floodplain developments, together with all pertinent information such as the nature of the proposal, legal description of the property, fill limits and elevations, building floor elevations and flood proofing measures.
- (b) Require the applicant to furnish any of the following additional information as is deemed necessary by the Department for evaluation of the effects of the proposal upon flood flows, to determine the boundaries of the floodway and, where applicable, the regional flood elevation:
  1. A typical valley cross-section showing the channel of the stream, the floodplain adjoining each side of the channel, the cross-sectional area to be occupied by the proposed development, and all historic high water information.
  2. Plan (surface view) showing: elevations or contours of the ground; pertinent structure, fill or storage elevations; size, location and spatial arrangement of all proposed and existing structures on the site; location and elevations of streets, water supply, and sanitary facilities; soil types and other pertinent information.
  3. Profile showing the slope of the bottom of the channel or flow line of the stream.
  4. Specifications for building construction and materials, flood proofing, filling, dredging, channel improvement, storage of materials, water supply and sanitary facilities.
- (c) Transmit one copy of the information described in paragraphs (a) and (b) to the appropriate District office of the Department along with a written request to have that agency provide technical assistance to establish regional flood elevations and, where applicable, floodway data. Where the provisions of Section 2.94 apply, the applicant shall provide all required information and computations.

**Note:** Section 7.4 sets forth the procedures and information needed to determine whether a proposed development to be located in the general floodplain district is in the floodway or flood fringe. Section 2.94 may also be applicable. It states that the applicant must provide all the engineering data and analysis, if the development exceeds 5 acres in area, \$75,000 in cost or is a subdivision. Where these standards are not met or exceeded, the applicant need only provide the field data to the municipality. The municipality may then refer the matter to the Department for a case-by-case analysis in which the engineering data is analyzed to determine if the development is in the floodway or flood fringe districts and to determine the regional flood elevations.

7.5 FLOOD PROOFING: Where flood proofing measures, as defined in Section 10.1(21) are required, they shall be designed to withstand the flood pressures, depths, velocities, uplift and impact forces, and other factors associated with the regional flood, to assure protection to the flood protection elevation. In addition, all flood proofing measures shall provide anchorage of structures to

foundations to resist flotation and lateral movement, and shall insure that the structural walls and floors are watertight (i.e., completely dry without human intervention during flooding) to the flood protection elevation, as defined in Section 10.1(22). The applicant shall submit a plan or document certified by a registered professional engineer or architect that the flood proofing measures are adequately designed to protect the structure or development to the flood protection elevation for the particular area. Flood proofing measures could include:

**Note:** For additional information, addressing design standards for floodproofing buildings and structures, engineers and architects should refer to the publication entitled, "Flood Proofing Regulations," dated June 1972, prepared by the U.S. Army Corps of Engineers. Copies of this document can be obtained by contacting the local Department District Water Management Coordinator.

7.51 Reinforcement of walls and floors to resist rupture or collapse caused by water pressure or floating debris;

7.52 Addition of mass or weight to structures to prevent flotation;

7.53 Placement of essential utilities above the flood protection elevation;

7.54 Surface drainage systems, including pumping facilities, to relieve external foundation wall and basement floor pressures;

7.55 Construction of water supply wells, and waste treatment systems so as to prevent the entrance of flood waters into such systems;

7.56 Cutoff valves on sewer lines and the elimination of gravity flow basement drains.

**Note:** Section 7.5 describes the various flood proofing measures which can be used to flood proof structures by means other than fill. This section sets the standards which flood proofing must meet, namely that all new structures, or additions to existing structures, developed within the regional floodplain must be watertight or dry flood proofed to the flood protection elevation. The first floor, meaning the lowest floor or basement floor, must either be elevated or floodproofed to the flood protection elevation in order to maintain these standards. Before the zoning administrator can accept an application for a permit involving flood proofing requirements, the applicant must obtain a certification signed by a registered professional engineer or architect, that the design for flood proofing measures is adequate to protect the structure or development to the flood protection elevation.

It should be remembered that the only permits which can be issued by the zoning administrator for flood proofed structures would be for manufacturing, agricultural or industrial related uses as described in Section 4.35. All other flood proofed structures would require a variance hearing before the board of adjustment/appeals due to the fact the standards for development in the flood fringe district requires the first floor of all residential and commercial structures to be elevated on fill.

See the example of a flood proofed structure in Chapter 6 of the Floodplain-Shoreland Management Guide Manual.

For more information addressing the importance of protecting structures to mitigate flood damages refer to the publication entitled, "Design Guidelines for Flood Damage Reduction," dated October 1981, prepared for FEMA by the American Institute of Architects (AIA) Research Corporation. Copies of the document can be obtained by contacting: AIA Research Corporation; 1735 New York Avenue N.W.; Washington, D.C. 20006.

## SECTION 8.0 AMENDMENTS

8.1 GENERAL: The (governing body) of the (county, city, village) of \_\_\_\_\_, Wisconsin, may change or supplement the boundaries of the floodplain zoning districts and the regulations contained in this ordinance in the manner provided by law. Official amendments are required for any changes in the official floodway lines, water surface profiles, floodplain zoning maps or text of the floodplain zoning ordinance. Actions which require an amendment include, but are not limited to, the following:

8.11 Any change in the official floodway line or boundary of the general floodplain area;

8.12 Correction of significant discrepancies between the water surface profiles and floodplain zoning maps;

8.13 Any fill in the floodplain which raises the elevation of the filled area to a height at or above the flood protection elevation and is contiguous to land lying outside the floodplain;

8.14 Any fill or encroachment into the floodplain that will cause a change, equal to or greater than 0.1 foot (3 cm.), in the height of the regional flood; and

8.15 Any upgrading of floodplain zoning ordinances required by Section NR 116.05(4), Wisconsin Administrative Code, or otherwise required by law.

8.2 AMENDMENT PROCEDURES: Amendments to this ordinance may be made upon petition of any interested party in accordance with the provisions of Section (62.23 for cities and villages) (59.97 for counties), of the Wisconsin Statutes. Such petitions shall include any necessary data required by Sections 7.42 and 2.94.

8.21 Copies of any amendment proposed to the (governing body) shall be referred to the zoning agency, described in Section 7.2, for a public hearing and recommendation to the (governing body). Copies of the proposed amendment and notice of the public hearing shall be submitted to the appropriate District office of the Department of Natural Resources. The amendment procedure shall comply with the provisions of Section (62.23 for cities and villages or 59.97 for counties), Wis. Statutes.

8.22 No amendment to the maps or text of this ordinance shall become effective until reviewed and approved by the Department of Natural Resources.

8.23 All persons petitioning for a map amendment which involves an increase in the height of the regional flood of 0.1 foot (3 cm.) or more shall obtain flooding easements, or other appropriate legal arrangements, from all affected local units of government and property owners before the municipality may approve an amendment which would result in such an increase to the regional flood elevation.



8.24 When considering amendments to the official floodplain zoning map, in areas where no water surface profiles exist, the zoning agency shall consider data submitted by the Department, the zoning administrator's visual on-site inspections and other available information. (See Section 2.22(b) of this ordinance.)

**Note:** Section 8.0 refers to amendments and the procedures to follow when an amendment is instituted. Any change made to the ordinance text or the official map and its corresponding profiles requires that an amendment be obtained. The Wisconsin enabling statutes for cities and villages, Section 62.23(7)(d), and for counties, Section 59.97(5), establish specific zoning ordinance amendment procedures. These procedures must be followed for all amendments made to this ordinance; failure to do so could result in the amendment being declared invalid.

#### SECTION 9.0 ENFORCEMENT AND PENALTIES

Any violation of the provisions of this ordinance by any person shall be unlawful and shall be referred to the (corporation counsel, district attorney, municipal attorney), who shall expeditiously prosecute all such violators. A violator shall, upon conviction, forfeit to the (county, city, village) a penalty of not less than \$ \_\_\_\_\_ and not more than \$ \_\_\_\_\_, together with a taxable cost of such action. Each day of continued violation shall constitute a separate offense. Every violation of this ordinance is a public nuisance and the creation thereof may be enjoined and the maintenance thereof may be abated by action at suit of the (county, city, village), the state, or any citizen thereof pursuant to Section 87.30, Wisconsin Statutes.

**Note:** Wisconsin zoning law provides for the disposition of violations through forfeitures, through injunctive relief (correction of the violation) or both. Forfeiture may be an effective weapon to use against relatively small violations, but the route of injunctions and abatement may be the necessary steps where large or expensive violations are involved, particularly if those violations will cause an increase in flood elevations affecting other property owners. In most instances, the monetary fine will be far less than what it would cost to abate a nuisance or a violation.

#### SECTION 10.0 DEFINITIONS

10.1 Unless specifically defined below, words and phrases used in this ordinance shall be interpreted so as to give them the same meaning as they have at common law and to give this ordinance its most reasonable application. Words used in the present tense include the future. Words used in the singular number include the plural and words in the plural number include the singular. The word "may" is permissive. The word "shall" is mandatory and not discretionary.

**Note:** The purpose of Section 10.1 is to clarify terms commonly used within the ordinance which reflect the policy of the ordinance. In some cases, terms are not defined and it is for that reason that they are to be given the same meaning as they have at common law. By "common law" we mean court decisions, in which the meaning of a particular term is decided in the context of a particular fact situation.

(1) "A ZONES" - Those areas shown on a municipality's "Official Floodplain Zoning Map" (see definition 32) which would be inundated by the "base flood" or "regional flood" as defined herein. These areas may be numbered as A0, A1 to A30, A99 or be unnumbered A Zones. The A Zones may or may not be reflective of flood profiles, depending on the availability of data for a given area.

(2) "ACCESSORY STRUCTURE OR USE" - A detached subordinate structure or a use which is clearly incidental to and customarily found in connection with the principal structure or use to which it is related, and which is located on the same lot as that of the principal structure or use.

(3) "BASE FLOOD" - A term used by the FEMA to mean that flood having a one percent chance of being equalled or exceeded in any given year. (Also see REGIONAL FLOOD.)

**Note:** The term "base flood" is synonymous with the terms "regional flood," "intermediate regional flood," and "100 year flood." It should be noted that the term "base flood" is referred to in much of the information received from FEMA. It is defined in this ordinance to reduce confusion when the term is used in the informational material put out by FEMA.

The U.S. Army Corps of Engineers references the "intermediate regional flood" as having the same duration and frequency as occurring once in every 100 years. This flood is the same as a regional flood. The Corps also references the "standard project flood" which is something larger than the regional flood and is based on the most severe combination of hydrological and meteorological conditions that is considered to be capable of occurring in any given watershed. The terms mentioned in this explanation may be contained in your flood insurance studies or other floodplain information documents which you use in conjunction with defining the floodplain districts in your municipality.

(4) "BUILDING" - See STRUCTURE.

(5) "BULKHEAD LINE" - A geographic line along a reach of navigable water that has been adopted by a municipal ordinance and approved by the Department of Natural Resources pursuant to Section 30.11, Wisconsin Statutes, and which allows complete filling to the landward side of the line, except where such filling is prohibited by the floodway provisions of this ordinance.

(6) "CERTIFICATE OF COMPLIANCE" - A certification issued by the zoning administrator stating that the use of land or a building, the elevation of fill or the first floor of a structure is in compliance with all of the provisions of this ordinance.

(7) "CHANNEL" - A natural or artificial watercourse with definite bed and banks to confine and conduct normal flow of water.

(8) "DEPARTMENT" - The Wisconsin Department of Natural Resources.

**Note:** The term "Department," for the sake of the model ordinance, refers to the Wisconsin Department of Natural Resources. In municipalities where the term "Department" is used to refer to the administering agency or zoning agency, referenced in Section 7.2, the term "Department" may need to be expanded to read Department of Natural Resources where appropriate.

(9) "DEVELOPMENT" - Any man-made change to improved or unimproved real estate, including but not limited to the construction of buildings, structures or accessory structures; the construction of additions or substantial improvements to buildings, structures or accessory structures; the placement of mobile homes; mining, dredging, filling, grading, paving, excavation or drilling operations; and the deposition or extraction of materials.

(10) "ENCROACHMENT" - Any fill, structure, building, use or development in the floodway.

(11) "EQUAL DEGREE OF HYDRAULIC ENCROACHMENT" - The effect of any encroachment into the floodway is computed by assuming an equal degree of hydraulic encroachment on the opposite side of a river or stream for a significant hydraulic reach, in order to compute the effect of the encroachment upon hydraulic conveyance. This computation assures that property owners up, down or across the river or stream will have the same rights of hydraulic encroachment. (Also see: HYDRAULIC REACH and FLOODWAY LINES.)

(12) "EQUAL DEGREE OF HYDROLOGIC ENCROACHMENT" - The effect of any development on the storage capacity of a floodplain area, particularly upstream from urban areas, is analyzed assuming an equal loss of flood storage for all property owners and subdivided lots in the storage area of a floodplain on both sides of a river or stream for a significant hydrologic reach.

**Note:** The terms hydraulic and hydrologic can simply be defined as follows: "hydraulic" means the movement of water through a channel and its adjacent floodplain, and "hydrologic" means the storage of water within the floodplain based on volume. When hydraulic encroachment is involved, water tends to back up causing higher flood levels upstream and when hydrologic encroachment occurs, the storage capacity is reduced causing water to move more quickly through the watershed causing higher flood elevations downstream.

(13) "EXISTING MOBILE HOME PARK OR MOBILE HOME SUBDIVISION" - A parcel (or contiguous parcels) of land divided into two or more mobile home lots for rent or sale on which the construction of facilities for servicing the lots (including, at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads, and the construction of streets) is completed before the effective date of this ordinance.

(14) "FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)" - The federal agency that administers the National Flood Insurance Program. This agency was previously known as the Federal Insurance Administration (FIA). The Division of Insurance and Mitigation is contained within FEMA. (Should it be necessary to contact FEMA for information or assistance, the Region V Office of the Federal Emergency Management Agency's Division of Insurance and Mitigation should be contacted.)

(15) "FLOOD" OR "FLOODING" - A general and temporary condition of partial or complete inundation of normally dry land areas caused by the overflow of inland waters, or the unusual and rapid accumulation or runoff of surface waters from any source.

(16) "FLOOD FRINGE" - That portion of the floodplain outside of the floodway which is covered by flood waters during the regional flood; it is generally associated with standing water rather than rapidly flowing water.

(17) "FLOOD HAZARD BOUNDARY MAP" - A map prepared for the (city, village, county) by FEMA designating approximate flood hazard areas. Flood hazard areas are designated as unnumbered A-Zones and do not contain floodway lines or regional flood elevations. Said map forms the basis for both the regulatory and insurance aspects of the National Flood Insurance Program.

(18) "FLOOD INSURANCE STUDY" - A technical engineering examination, evaluation, and determination of the (city, village, county) flood hazard areas. It provides maps designating those areas affected by the regional flood and provides both flood insurance rate zones and regional flood elevations as well as floodway lines. The flood hazard areas are designated as numbered A-Zones. Flood insurance study maps form the basis for both the regulatory and the insurance aspects of the National Flood Insurance Program.

**Note:** A "Flood Insurance Study," commonly referred to as an "FIS," is a written document providing both the historic flood information and data that was used to compile the flood elevations along rivers and streams studied within a municipality. The FIS provides the applicant or developer with a regional flood elevation which can be used to construct the first floor of a building at the flood protection elevation. Any questions concerning how to use the information contained in the study should be directed to the water management coordinator located in the district or area office of the Department of Natural Resources.

Where a community has only a flood hazard boundary map to rely on, it is not possible to determine the regional flood elevation without first doing a case-by-case analysis. In such cases, the zoning administrator should contact the Department for assistance in determining how to obtain or acquire the flood elevation information. It must also be remembered that a community can provide this service for the developer or, as is provided for in this ordinance, require the applicant to provide the necessary cross sectional data to make these determinations. Where the provisions contained in Section 2.94 are exceeded, the applicant is required to provide the calibrations and determinations at their expense. This is not true where the community has a FIS with detailed regional flood elevations and floodways delineated; in cases such as this the developer must submit their detailed analysis without regard to dollar or size limitations.

(19) "FLOODPLAIN" - That land which has been or may be hereafter covered by flood water during the regional flood. The floodplain is comprised of the floodway and the flood fringe.

(20) "FLOOD PROFILE" - A graph or a longitudinal profile line showing the relationship of the water surface elevation of a flood event to locations of land surface elevations along a stream or river.

(21) "FLOOD PROOFING" - Any combination of structural and nonstructural additions, changes or adjustments which reduce or eliminate flood damage to unimproved or improved real estate, water and sanitary facilities, structures and their contents.

(22) "FLOOD PROTECTION ELEVATION" - An elevation that corresponds to a point two feet of freeboard above the water surface profile associated with the regional flood. (Also see: FREEBOARD.)

(23) "FLOODWAY" - The channel of a river or stream and those portions of the floodplain adjoining the channel required to carry and discharge the flood water or flood flows associated with the regional flood without cumulatively increasing the water surface elevation more than 0.1 foot (3 cm.).

(24) "FLOODWAY ENCROACHMENT LINES" - Represent the limits of obstruction to flood flows. These lines are designated on both sides of, and generally parallel to, the channel of a river or stream. They are established by assuming that the area landward (outside of the encroachment lines) will ultimately be developed in such a way that it will not convey flood flows, but the development will not cause an increase to regional flood elevations upstream. It is assumed that any development riverward of these lines will cause an obstruction and will require a detailed analysis (equal degree of hydraulic encroachment) to determine its effect on the regional flood elevations upstream.

(25) "FREEBOARD" - Represents a factor of safety usually expressed in terms of a certain amount of feet above a calculated flood level. Freeboard compensates for the many unknown factors that contribute to flood heights greater than the height calculated. These unknown factors include, but are not limited to, ice jams, debris accumulation, wave action, obstruction of bridge openings and floodways, the effects of urbanization on the hydrology of the watershed, loss of flood storage areas due to development and the sedimentation of a river or stream bed.

(26) "HIGH FLOOD DAMAGE POTENTIAL" - Any danger to human life or public health or the potential for any significant economic loss to a structure or its contents.

**Note:** The term "high flood damage potential" is referred to from time to time in the ordinance as a means of determining whether or not a use or structure can be developed below the required development standards as contained in Section 4.31. This determination is not something that can be given a clear limit based on either cost or danger to life, health or property. Rather, it is an indicator that can be applied by the local board of adjustment/appeals in determining if a development can or cannot occur below the required standards for development. An example of high flood damage potential could be where a grocery store is constructed below the flood protection elevation and is not flood proofed to the flood protection elevation, thereby exposing all of the produce within the store to flood damages. This type of situation could result in a significant economic loss to the contents, although not severely affecting the structure. In such a case, the board of adjustment/appeals would be justified in requiring the entire structure to be either elevated or floodproofed to the flood protection elevation.

(27) "HYDRAULIC REACH" - That portion of the river or stream extending from one significant change in the hydraulic character of the river or stream to the next significant change. These changes are usually associated with breaks in the slope of the water surface profile, and may be caused by bridges, dams, expansion and contraction of the water flow, and changes in stream bed slope or vegetation.

(28) "HYDROLOGIC REACH" - A designated length of river, stream or lake where the storage of flood waters therein has been taken into account to reduce the regulatory flood discharge. Major man-made or natural changes in the river character, limits of political jurisdiction, or a change in the flood-routing technique used to determine the storage and translation of a flood wave through the area of interest may be used to define the end of a hydrologic reach (e.g., a dam may be considered a major man-made change in the river character or a change from channel routing to reservoir routing may be considered a major change in the flood-routing technique).

(29) "LAND USE" - Any nonstructural use made of unimproved or improved real estate. (Also see DEVELOPMENT.)

(30) "MOBILE HOME" - A structure transportable in one or more sections, which is built on a permanent chassis and is designed to be used with or without a permanent foundation when connected to required utilities. For the purpose of this ordinance, it does not include recreational vehicles or travel trailers.

(31) "NONCONFORMING STRUCTURE" - An existing lawful structure or building which is not in conformity with the dimensional or structural requirements of this ordinance for the area of the floodplain which it occupies. (For example, an existing residential structure in the flood fringe district is a conforming use. However, if the first floor is lower than the flood protection elevation, the structure is nonconforming.)

(32) "NONCONFORMING USE" - An existing lawful use or accessory use of a structure or building which is not in conformity with the provisions of this ordinance for the area of the floodplain which it occupies.

(33) "OFFICIAL FLOODPLAIN ZONING MAP" - That map, adopted and made part of this ordinance, as described in Section 2.2, which has been approved by the Department of Natural Resources and FEMA.

(34) "OPEN SPACE USE" - Those uses having a relatively low flood damage potential and not involving structures.

(35) "PERSON" - An individual, or group of individuals, corporation, partnership, association, municipality or state agency.

(36) "REGIONAL FLOOD" - A flood determined to be representative of large floods known to have generally occurred in Wisconsin and which may be expected to occur on a particular stream because of like physical characteristics. The flood frequency of the regional flood is once in every 100 years. This means that in any given year, there is a 1% chance that the regional flood may occur or be exceeded. During a typical 30-year mortgage period, the regional flood has a 26% chance of occurrence. (The regional flood is based upon a statistical analysis of stream flow records available for the watershed or an analysis of rainfall and runoff characteristics in the general watershed region.)

(37) "STORAGE CAPACITY OF A FLOODPLAIN" - The volume of space above an area of floodplain land that can be occupied by flood water of a given stage at a given time, regardless of whether the water is moving.

(38) "STRUCTURE" - Any manmade object with form, shape and utility, either permanently or temporarily attached to, placed upon or set into the ground, stream bed or lake bed, which includes, but is not limited to, such objects as roofed and walled buildings, gas or liquid storage tanks, bridges, dams and culverts.

**Note:** The term "structure" lists some examples of the types of things that could be interpreted to be structures. Be aware that this list represents only an example of the types of objects that can be construed as structures. A common misconception is that a structure is only a building that has a roof and four walls. Be aware it is any manmade object that is placed on, in, over or under the ground, and is not limited to only the examples listed.

(39) "SUBSTANTIAL IMPROVEMENT" - Any structural repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the present equalized assessed value of the structure either before the improvement or repair is started, or if the structure has been damaged, and is being restored, before the damage occurred. The term does not, however, include either: (a) any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions, or (b) any alteration of a structure or site documented as deserving preservation by the Wisconsin State Historical Society or listed on the National Register of Historic Places. Ordinary maintenance repairs are not considered structural repairs, modifications or additions. Such ordinary maintenance repairs include internal and external painting, decorating, paneling, and the replacement of doors, windows, and other nonstructural components. (For purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.)

(40) "UNNECESSARY HARDSHIP" - Any unique and extreme inability to conform to the provisions of this ordinance due to special conditions affecting a particular property which were not self-created and are not solely related to economic gain or loss. Unnecessary hardship is present only where, in the absence of a variance, no feasible use can be made of the property.

**Note:** In order for any variance to be granted, the board of adjustment/appeal, must determine if unnecessary hardship has been demonstrated sufficiently to warrant a permit to be issued which is inconsistent with the dimensional standards as contained within the ordinance. An example would be in a case where a structure is to be constructed on a substandard lot, where it is impossible to satisfy requirements for the placing of fill and extending that fill 15 feet from the outside dimensions of the structure, either due to the narrow dimensions or the physical character of the lot, which would prevent the owner of the lot from being able to use the property if a variance is not granted. The considerations involved in determining unnecessary hardship are as varied as there are properties in a municipality. However, the board must clearly state in what way unnecessary hardship is demonstrated before such variation is granted.

(41) "UTILITIES" - Any public or private water supply, waste collection or disposal system, including, but not limited to, private and public wells and their attendant facilities, septic systems and public sewage collection systems.

(42) "VARIANCE" - An authorization granted by the board of (adjustment/appeals) to construct, alter or use a structure in a manner which is inconsistent with the dimensional standards contained in this ordinance.

**Note:** A variance may not be used to permit a use of property otherwise prohibited by this ordinance. Unnecessary hardship must be demonstrated by the applicant/property owner before a variance can be granted.

Date of Public Hearing: \_\_\_\_\_

Date of Adoption: \_\_\_\_\_

Date of Publication: \_\_\_\_\_

**Note:** Be aware that the provisions contained in this model ordinance represent both the minimum regulatory standards required in Chapter NR 116, Wisconsin Administrative Code, and certain minimum standards prescribed by the National Flood Insurance Program. Section 87.30(1)(b), Wisconsin Statutes, permits a county, city, village or town to adopt a floodplain zoning ordinance that is more restrictive than the provisions required by the State, but it cannot be less restrictive. Should a municipality want to adopt an ordinance that is more restrictive, they can receive assistance from the Department's Floodplain-Shoreland Management staff in developing such an ordinance. Some municipalities simply allow no development within their designated regional floodplain districts other than that associated with open space recreational use.

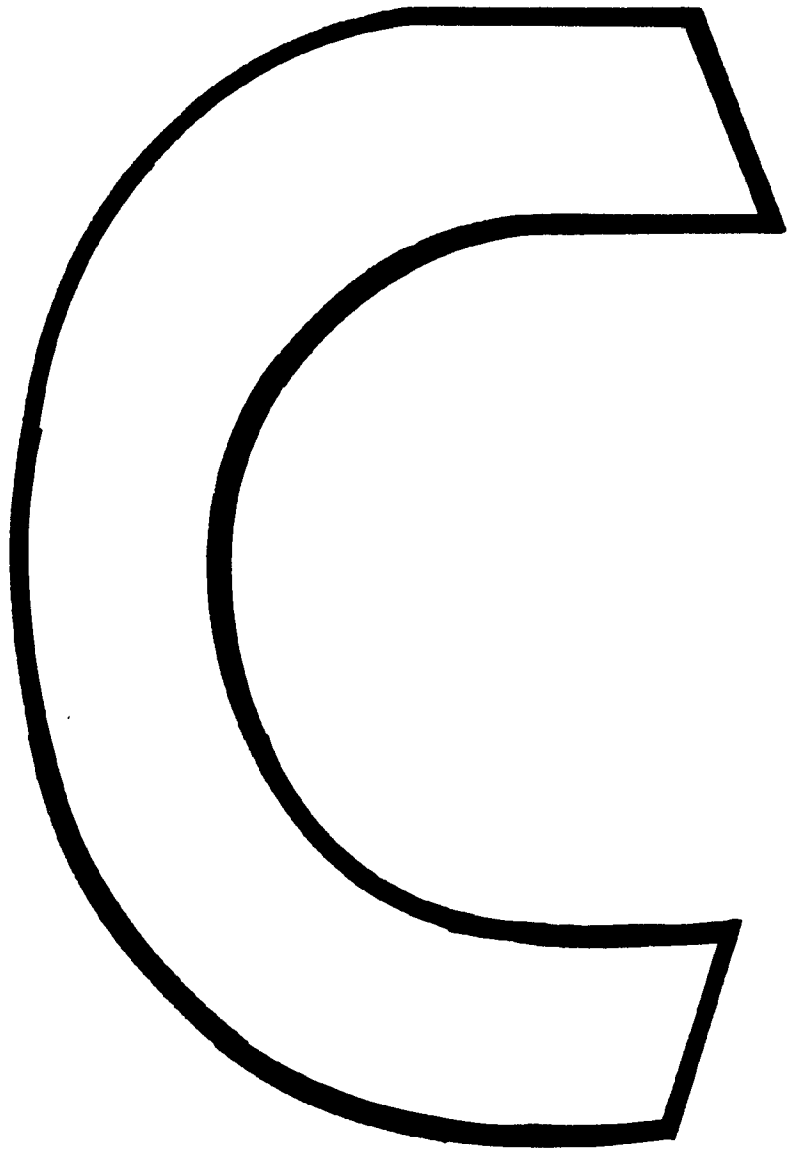
This model ordinance needs only to have the blank spaces filled in or have "city," "village" or "county," or "board of adjustment" or "board of appeals" designated.

Before taking official action to adopt a floodplain zoning ordinance, the municipality should submit the ordinance to the Department's District or Area office. It is recommended that the ordinance be submitted to the Department at least 30 days prior to the public hearing on the ordinance. The purpose of this review time is to allow the Department to adequately review the proposed ordinance to determine whether or not it meets all minimum standards.

In all cases, municipalities should contact the Department prior to designating their official floodplain zoning map to ensure that they are using the most recent and most accurate map available as their official floodplain zoning map.

0973H.PERM





**SHORELAND  
REGULATORY FRAMEWORK**

**Section 59.971, Wisconsin Statutes**  
**Statutory Authority for Shoreland Zoning**

**59.971 Zoning of shorelands on navigable waters.** (1) To effect the purposes of s. 144.26 and to promote the public health, safety and general welfare, counties may, by ordinance enacted separately from ordinances pursuant to s. 59.97, zone all lands (referred to herein as shorelands) in their unincorporated areas within the following distances from the normal high-water elevation of navigable waters as defined in s. 144.26 (2) (d): 1,000 feet from a lake, pond or flowage; 300 feet from a river or stream or to the landward side of the flood plain, whichever distance is greater. If the navigable water is a glacial pothole lake, the distance shall be measured from the high watermark thereof.

(2) (a) Except as otherwise specified, all provisions of s. 59.97 apply to ordinances and their amendments enacted under this section, but they shall not require approval or be subject to disapproval by any town or town board.

(b) If an existing town ordinance relating to shorelands is more restrictive than an ordinance later enacted under this section affecting the same shorelands, it continues as a town ordinance in all respects to the extent of the greater restrictions, but not otherwise.

(c) Ordinances enacted under this section shall accord and be consistent with any comprehensive zoning plan or general zoning ordinance applicable to the enacting counties, so far as practicable.

(3) All powers granted to a county under s. 236.45 may be exercised by it with respect to shorelands, but it must have or provide a planning agency as defined in s. 236.02 (1).

(4) (a) Section 66.30 applies to this section, except that for the purposes of this section any agreement under s. 66.30 shall be effected by ordinance. If the municipalities as defined in s.

144.26 are served by a regional planning commission under s. 66.945, the commission may, with its consent, be empowered by the ordinance of agreement to administer each ordinance enacted hereunder throughout its enacting municipality, whether or not the area otherwise served by the commission includes all of that municipality.

(b) Variances and appeals regarding shorelands within a county are for the board of adjustment for that county under s. 59.99, and the procedures of that section apply.

(5) An ordinance enacted under this section supersedes all provisions of an ordinance enacted under s. 59.97 that relate to shorelands.

(6) If any county does not adopt an ordinance by January 1, 1968, or if the department of natural resources, after notice and hearing, determines that a county has adopted an ordinance which fails to meet reasonable minimum standards in accomplishing the shoreland protection objectives of s. 144.26 (1), the department of natural resources shall adopt such an ordinance. As far as possible, s. 87.30 shall apply to this subsection.

See note to art. I, sec. 13, citing *Just v. Marinette County*, 36 W (2d) 7, 201 NW (2d) 761.

County floodplain zoning ordinances may be adopted under 59.971 and do not require the approval of town boards in order to become effective within the unincorporated areas of the county. 62 Atty. Gen. 264.

Counties may zone lands located within 300 feet of an artificial ditch that is navigable in fact. 63 Atty. Gen. 57.

County shoreland zoning of unincorporated areas adopted under 59.971 is not superseded by municipal extraterritorial zoning under 62.23 (7a). Sections 59.971, 62.23 (7), (7a) and 144.26 discussed. Municipal extraterritorial zoning within shorelands is effective insofar as it is consistent with, or more restrictive than, the county shoreland zoning regulations. 63 Atty. Gen. 69.

The necessity of zoning variance or amendments notice to the Wisconsin department of natural resources under the shoreland zoning and navigable waters protection acts. Whipple, 57 MLR 25.

The following pages are Chapter NR 115,  
**Wisconsin Administrative Code, Wisconsin's**  
Shoreland Management Program. It specifies the  
rules and procedures for regulating shorelands in  
Wisconsin.

Chapter NR 115

WISCONSIN'S SHORELAND MANAGEMENT PROGRAM

NR 115.01 Purpose	NR 115.06 Shoreland regulation standards and criteria
NR 115.02 Applicability	NR 115.06 Department duties
NR 115.03 Definitions	
NR 115.04 Severability	

Note: Chapter NR 115 as it existed on July 31, 1980 was repealed and a new chapter NR 115 was created effective August 1, 1980.

**NR 115.01 Purpose.** (1) Section 59.971, Stats., requires counties to adopt zoning and subdivision regulations for the protection of all shorelands in unincorporated areas by January 1, 1968, and provides that if the department of natural resources determines, after notice and hearing, that a county has not adopted a shoreland ordinance by January 1, 1968, or that a county has adopted an ordinance which fails to meet reasonable minimum standards in accomplishing the shoreland protection objectives found in s. 114.26, [144.26] Stats., the department is to adopt a shoreland ordinance to be administered by that county.

(2) Section 114.26, [144.26] Stats., provides that shoreland subdivision and zoning regulations shall: "further the maintenance of safe and healthful conditions; prevent and control water pollution; protect spawning grounds, fish and aquatic life; control building sites, placement of structure and land uses and reserve shore cover and natural beauty."

(3) It is the responsibility of the department of natural resources, in the discharge of its mandate under ss. 59.971 and 144.26, Stats., to require adherence to specific standards and criteria for navigable water protection regulations and their administration. Section 144.26, Stats., provides that: "Such standards and criteria shall give particular attention to safe and healthful conditions for the enjoyment of aquatic recreation; the demands of water traffic, boating and water sports; the capability of the water resource; requirements necessary to assure proper operation of septic tank disposal fields near navigable waters; building setbacks from the water; preservation of shore growth and cover; conservation uses for low lying lands; shoreland layout for residential and commercial development; suggested regulations and suggestions for the effective administration and enforcement of such regulations."

History: Cr. Register, July, 1980, No. 295, eff. 8-1-80.

**NR 115.02 Applicability.** The provisions of this chapter are applicable to county regulation of the use and development of unincorporated shoreland areas. Unless specifically exempted by law, all cities, villages, towns, counties and, when s. 13.48 (13), Stats., applies, state agencies are required to comply with, and obtain all necessary permits under, local shoreland ordinances. The construction, reconstruction, maintenance and repair of state highways and bridges, carried out under the direction and supervision of the Wisconsin department of transportation

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tion, are not subject to local shoreland zoning ordinances, if s. 30.12(4) (a), Stats., applies.

History: Cr. Register, July, 1980, No. 295, eff. 8-1-80; am. Register, October, 1980, No. 298, eff. 11-1-80.

**NR 115.03 Definitions.** For the purpose of this chapter:

(1) "Boathouse" means a permanent structure used for the storage of watercraft and associated materials and includes all structures which are totally enclosed, have roofs or walls or any combination of these structural parts.

(2) "County zoning agency" means that committee or commission created or designated by the county board under s. 59.97(2) (a), Stats., to act in all matters pertaining to county planning and zoning.

(3) "Department" means the department of natural resources.

(4) "Flood plain" means the land which has been or may be hereafter covered by flood water during the regional flood. The flood plain includes the floodway and the flood fringe as those terms are defined in chapter NR 116, Wis. Adm. Code.

(5) "Navigable waters" means Lake Superior, Lake Michigan, all natural inland lakes within Wisconsin and all streams, ponds, sloughs, flowages and other waters within the territorial limits of this state, including the Wisconsin portion of boundary waters, which are navigable under the laws of this state. Under s. 144.26 (2) (d), Stats., notwithstanding any other provision of law or administrative rule promulgated thereunder, shoreland ordinances required under s. 59.971, Stats., and this chapter do not apply to lands adjacent to farm drainage ditches if:

- (a) Such lands are not adjacent to a natural navigable stream or river;
- (b) Those parts of such drainage ditches adjacent to such lands were nonnavigable streams before ditching or had no previous stream history; and
- (c) Such lands are maintained in nonstructural agricultural use.

Note: In *Muench v. Public Service Commission*, 261 Wis. 492 (1962), the Wisconsin Supreme Court held that a stream is navigable in fact if it is capable of floating any boat, cliff, or canoe, of the shallowest draft used for recreational purposes. In *DeFrayner and Co., Inc. v. Department of Natural Resources*, 70 Wis. 2d 936 (1975), the court also held that a stream need not be navigable in its normal or natural condition to be navigable in fact. The *DeFrayner* opinion indicates that it is proper to consider artificial conditions, such as beaver dams, where such conditions have existed long enough to make a stream useful as a highway for recreation or commerce, and to consider ordinarily recurring seasonal fluctuations, such as spring floods, in determining the navigability of a stream.

(6) "Ordinary high-water mark" means the point on the bank or shore up to which the presence and action of surface water is so continuous as to leave a distinctive mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristic. Where the bank or shore at any particular place is of such character that it is difficult or impossible to ascertain where the point of ordinary high-water mark is, recourse may be had to the opposite bank of a stream or to other places on the shore of a lake or flowage to determine whether a given stage of water is above or below the ordinary high-water mark.

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Before the department prepares final Wisconsin wetland inventory maps:

1. The department shall transmit to the county zoning agency designated under s. 59.97 (2) (a), Stats., copies of preliminary wetland inventory maps for that county.
2. The county zoning agency shall have 90 days to review the preliminary maps unless the review period is extended by written approval of the department, but in no case shall the review period extend for more than 180 days.
3. The county zoning agency shall hold a public hearing to solicit public comments on the preliminary wetland inventory maps. Notice of the time and place of the hearing shall be mailed to the town clerk of each town in the county and shall be published as a class 1 notice, under ch. 985, Stats.

4. On or before the last day of the review period, the county zoning agency shall return the preliminary maps to the department. If the county zoning agency believes that the preliminary maps are inaccurate, discrepancies shall be noted on the maps with an accompanying narrative explaining the problem areas.

5. The department shall schedule a meeting with the county zoning agency within 30 days of the return of the preliminary maps if the county zoning agency has indicated that they believe that there are inaccuracies on the maps.

6. After meeting with the county zoning agency to discuss apparent map inaccuracies, the department shall, at department expense, consult available soil survey maps and conduct on-site inspections, if appropriate, in order to evaluate the county recommendations, and shall then prepare the final Wisconsin wetland inventory maps for that county.

7. The adoption of a final Wisconsin wetland inventory map is a final decision of the department and may be reviewed as provided in ch. 227, Stats.

(b) *County adoption of shoreland-wetland zoning.* 1. Each county shall, within 6 months after receipt of final Wisconsin wetland inventory maps for that county from the department, zone all shorelands within the county that are designated as wetlands on the Wisconsin wetland inventory maps, in a shoreland-wetland zoning district.

2. Ordinance text and map amendments creating shoreland-wetland zoning districts shall be referred to the county zoning agency for public hearing as required by s. 59.97 (5) (e) 3., Stats.

3. The appropriate district office of the department shall be provided with a copy of the proposed text and map amendments and with written notice of the public hearing at least 10 days prior to such hearing.

(c) *Permitted uses in shoreland-wetland zoning districts.* Within shoreland-wetland zoning districts, counties shall permit the following uses subject to the general requirements of sub. (3), the provisions of chs. 30 and 31, Stats., and other state and federal laws, if applicable:

1. Hiking, fishing, trapping, hunting, swimming and boating.

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## DEPARTMENT OF NATURAL RESOURCES NR 115 353

(7) "Regional flood" means a flood determined to be representative of large floods known to have generally occurred in Wisconsin and which may be expected to occur on a particular stream because of like physical characteristics once in every 100 years.

Note: The regional flood is based upon a statistical analysis of streamflow records available for the watershed and/or an analysis of rainfall and runoff characteristics in the general watershed region. The flood frequency of the regional flood is once in every 100 years. In any given year, there is a 1% chance that the regional flood may occur. During a typical 30-year mortgage period, the regional flood has a 26% chance of occurring.

(8) "Shorelands" means lands within the following distances from the ordinary high-water mark of navigable waters: 1,000 feet from a lake, pond or flowage; and 300 feet from a river or stream or to the landward side of the flood plain, whichever distance is greater.

(9) "Shoreland-wetland zoning district" means a zoning district, created as a part of a county shoreland zoning ordinance, comprised of shorelands that are designated as wetlands on the Wisconsin wetland inventory maps prepared by the department.

(10) "Special exception (conditional use)" means a use which is permitted by a shoreland zoning ordinance provided that certain conditions specified in the ordinance are met and that a permit is granted by the board of adjustment or, where appropriate, the planning and zoning committee or county board.

(11) "Unnecessary hardship" means that circumstance where special conditions affecting a particular property, which were not self-created, have made strict conformity with restrictions governing area, setbacks, frontage, height or density unnecessarily burdensome or unreasonable in light of the purposes of the zoning ordinance.

(12) "Variance" means an authorization granted by the board of adjustment to construct, alter or use a building or structure in a manner that deviates from the requirements of a shoreland zoning ordinance.

(13) "Wetlands" means those areas where water is at, near or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation, and which have soils indicative of wet conditions.

History: Cr. Register, July, 1980, No. 295, eff. 8-1-80; renum. (2) to (12) to be (3) to (13), cr. (2), r. and rev. (7), am. (11) and (13), Register, October, 1980, No. 298, eff. 11-1-80.

NR 115.04 Severability. Should any provision of this chapter be declared invalid or unconstitutional for any reason, the remainder of this chapter shall not be affected thereby.

History: Cr. Register, July, 1980, No. 295, eff. 8-1-80.

NR 115.05 Shoreland regulation standards and criteria. (1) ESTABLISHMENT OF APPROPRIATE ZONING DISTRICTS. Counties shall adopt shoreland ordinances that include, at a minimum, zoning regulations for shoreland-wetland zoning districts. Other types of districts (such as general purpose, agricultural, industrial, commercial, residential, recreational, conservancy, or wetlands districts) may be created in addition to shoreland-wetland zoning districts.

(2) ESTABLISHMENT AND REGULATION OF SHORELAND-WETLAND ZONING DISTRICTS. (a) *County review of preliminary wetland inventory maps.*

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operator of a new private recreation or wildlife area to be located in a shoreland-wetland zoning district shall be required to notify the county zoning agency of the proposed project before beginning construction. Ditching, excavating, dredging, dike and dam construction shall be allowed in wildlife refuges, game preserves, and private wildlife habitat areas for the purpose of improving wildlife habitat or to otherwise enhance wetland values.

10. The construction and maintenance of electric, gas, telephone, water and sewer transmission and distribution lines, and related facilities, by public utilities and cooperative associations organized for the purpose of producing or furnishing heat, light, power or water to their members, which cannot as a practical matter be located outside the wetland, provided that any filling, excavating, ditching or draining necessary for such construction or maintenance is done in a manner designed to minimize flooding and other adverse impacts upon the natural functions of the wetland.

Note: Major electrical generating facilities and high-voltage transmission lines that have obtained a certificate of public convenience and necessity under s. 198.491, Stats., are not subject to the requirements of local ordinances.

11. The construction and maintenance of railroad lines which cannot as a practical matter be located outside the wetland, provided that any filling, excavating, ditching or draining necessary for such construction or maintenance is done in a manner designed to minimize flooding and other adverse impacts upon the natural functions of the wetland.

12. The maintenance, repair, replacement, and reconstruction of existing town and county highways and bridges.

(d) *Prohibited uses in shoreland-wetland zoning districts.* Any use not permitted in par. (c) is prohibited in a shoreland-wetland zoning district unless the wetland or portion thereof is rezoned by amendment of the county shoreland zoning ordinance in accordance with s. 59.79 (5) (e), Stats., and the procedures outlined in par. (e).

(e) *Rezoning of shoreland-wetland zoning districts.* 1. Official ordinance amendments are required for any change in shoreland-wetland zoning. Such amendments shall be made upon petition in accordance with provisions of s. 59.97 (5) (e), Stats.

2. The county clerk shall submit a copy of every petition for an amendment to the shoreland-wetland zoning district to the appropriate district office of the department within 5 days of the filing of such petition with the clerk.

3. All proposed text and map amendments to shoreland-wetland zoning districts shall be referred to the county zoning for a public notice and hearing as required by s. 59.97 (5) (e) 3., Stats. The appropriate district office of the department shall be provided with written notice of the public hearing at least 10 days prior to such hearing.

4. In order to ensure that the shoreland protection objectives found in s. 144.26, Stats., will be accomplished by the county shoreland ordinance, a county shall not rezone a shoreland-wetland zoning district, or portion thereof, if the proposed rezoning may result in a significant adverse impact upon any of the following:

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2. The harvesting of wild crops, such as marsh hay, ferns, moss, wild rice, berries, tree fruits and tree seeds, in a manner that is not injurious to the natural reproduction of such crops and that does not involve filling, flooding, draining, dredging, ditching, tiling or excavating.

3. The practice of silviculture, including the planting, thinning and harvesting of timber, provided that no filling, flooding, draining, dredging, ditching, tiling or excavating is done except as required to construct and maintain roads which are necessary to conduct silvicultural activities, which cannot as a practical matter be located outside the wetland, and which are designed and constructed to minimize the adverse impact upon the natural functions of the wetland, or except as required for temporary water level stabilization measures to alleviate abnormally wet or dry conditions which would have an adverse impact on the conduct of silvicultural activities if not corrected.

Note: Local units of government, in the development and application of ordinances which apply to shoreland areas, must consider other programs of statewide interest and other state regulations affecting the lands to be regulated, i. e. regulations and management practices applicable to state and county forests and lands entered under the forest cropland and woodland tax law programs.

4. The pasturing of livestock and the construction and maintenance of fences, provided that no filling, flooding, draining, dredging, ditching, tiling or excavating is done.

5. The cultivation of agricultural crops if cultivation can be accomplished without filling, flooding or artificial drainage of the wetland through ditching, tiling, dredging or excavating except that flooding, dike and dam construction, and ditching shall be allowed for the purpose of growing and harvesting cranberries. The maintenance and repair of existing drainage systems (such as ditching and tiling) shall be permitted. The construction and maintenance of roads shall be permitted if the roads are necessary for agricultural cultivation, cannot as a practical matter be located outside the wetland, and are designed and constructed to minimize the adverse impact upon the natural functions of the wetland.

6. The construction and maintenance of duck blinds provided that no filling, flooding, draining, dredging, ditching, tiling or excavating is done.

7. The construction and maintenance of nonresidential buildings used solely in conjunction with the raising of waterfowl, minnows, or other wetland or aquatic animals, or used solely for some other purpose which is compatible with wetland preservation if such building cannot as a practical matter be located outside the wetland, not to exceed 500 square feet, provided that no filling, flooding, draining, dredging ditching, tiling or excavating is done.

8. The construction and maintenance of piers, docks and walkways, including those built on pilings, provided that no filling, flooding, dredging, draining, ditching, tiling or excavating is done.

9. The establishment and development of public and private parks and recreation areas, boat access sites, natural and outdoor education areas, historic and scientific areas, wildlife refuges, game preserves and private wildlife habitat areas, provided that no filling is done and that any private wildlife habitat area is used exclusively for that purpose. The owner

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- a. Storm and flood water storage capacity;
  - b. Maintenance of dry season stream flow, or the discharge of groundwater to a wetland, the recharge of groundwater from a wetland to another area, or the flow of groundwater through a wetland;
  - c. Filtering or storage of sediments, nutrients, heavy metals or organic compounds that would otherwise drain into navigable waters;
  - d. Shoreline protection against soil erosion;
  - e. Fish spawning, breeding, nursery or feeding grounds;
  - f. Wildlife habitat; or
  - g. Areas of special recreational, scenic or scientific interest, including scarce wetland types.
5. If the department determines that the proposed rezoning may have a significant adverse impact upon any of the criteria listed in subd. 4, the department shall notify the county zoning agency of its determination either prior to or during the public hearing held on the proposed amendment.
6. As soon as possible after holding a public hearing, the county zoning agency shall submit its written findings and recommendations to the county board. Said findings shall outline the reasons for the agency's recommendations. After receipt of the county zoning agency's findings and recommendations, the board may approve or disapprove of the proposed amendment.

7. The appropriate district office of the department shall be provided with:

- a. A copy of the county zoning agency's findings and recommendations on the proposed amendment within 10 days after the submission of those findings and recommendations to the county board; and
  - b. Written notice of the board's decision on the proposed amendment within 10 days after it is issued.
8. If the county board approves of the proposed amendment and the department determines, after review as required by section NR 115.06 (2) (c), that the county shoreland zoning ordinance if so amended would no longer comply with the requirements of s. 59.971, Stats., and this chapter, the department shall, after notice and hearing, adopt a complying ordinance for the county, under s. 59.971 (6), Stats.
9. If the department has notified the county zoning agency that a proposed amendment may have a significant adverse impact upon any of the criteria listed in subd. 4, that proposed amendment, if approved by the county board, shall not become effective until more than 30 days have elapsed since written notice of the county board's approval was mailed to the department, as required by subd. 7. If within the 30-day period the department notifies the county board that the department intends to adopt a superseding shoreland zoning ordinance for the county under s. 59.971 (6), Stats., the proposed amendment shall not become effective while the ordinance adoption procedure is proceeding,

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but shall have its effect stayed until the s. 59.971 (6), Stats., procedure is completed or otherwise terminated.

(3) ESTABLISHMENT OF ZONING REGULATIONS FOR SHORELAND AREAS. The shoreland zoning ordinance adopted by each county shall provide sufficient control of the use of shorelands to afford the protection of water quality as specified in chs. NR 102 and NR 103, Wis. Adm. Code. At a minimum, the ordinance shall include the following provisions:

(a) *Minimum lot sizes.* Minimum lot sizes in the shoreland area shall be established to afford protection against danger to health, safety and welfare, and protection against pollution of the adjacent body of water.

1. Lots served by public sanitary sewer shall have a minimum average width of 65 feet and a minimum area of 10,000 square feet.
2. Lots not served by public sanitary sewer shall have a minimum average width of 100 feet and a minimum area of 20,000 square feet.

(b) *Building setbacks.* Permitted building setbacks shall be established to conform to health, safety and welfare requirements, preserve natural beauty, reduce flood hazards and avoid water pollution.

1. Unless an existing development pattern exists, a setback of 75 feet, from the ordinary high-water mark of an adjacent body of water to the nearest part of a building or structure, shall be required for all buildings and structures, except piers, boat hoists and boathouses.

2. Buildings and structures to be constructed or placed in a flood plain shall be required to comply with any applicable flood plain zoning ordinance.

3. The use of boathouses for human habitation and the construction or placing of boathouses beyond the ordinary high-water mark of any navigable waters shall be prohibited.

(c) *Trees and shrubbery.* The cutting of trees and shrubbery shall be regulated to protect natural beauty, control erosion and reduce the flow of effluents, sediments and nutrients from the shoreland area.

1. In the strip of land 35 feet wide inland from the ordinary high-water mark, no more than 30 feet in any 100 feet shall be clear-cut.
2. In shoreland areas more than 35 feet inland, trees and shrub cutting shall be governed by consideration of the effect on water quality and consideration of sound forestry practices and soil conservation practices.

3. The tree and shrubbery cutting regulations required by this paragraph shall not apply to the removal of dead, diseased or dying trees or shrubbery.

(d) *Filling, grading, lagooning, dredging, ditching and excavating.* Filling, grading, lagooning, dredging, ditching and excavating may be permitted only in accordance with the provisions of sub. (2), the requirements of ch. 30, Stats., and other state and federal laws where applicable, and only if done in a manner designed to minimize erosion, sedimentation and impairment of fish and wildlife habitat.

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(a) The appointment of an administrator and such additional staff as the workload may require.

(b) The creation of a zoning agency, as authorized by s. 59.97, Stats., a board of adjustment, as authorized by s. 59.99, Stats., and a county planning agency, as defined in s. 236.02 (1), Stats., and required by s. 59.971 (3), Stats.

(c) A system of permits for all new construction, development, reconstruction, structural alteration or moving of buildings and structures. A copy of all applications shall be required to be filed in the office of the county zoning administrator.

(d) Regular inspection of permitted work in progress to insure conformity of the finished structures with the terms of the ordinance.

(e) A variance procedure which authorizes the board of adjustment to grant such variance from the terms of the ordinance as will not be contrary to the public interest where, owing to special conditions and the adoption of the shoreland zoning ordinance, a literal enforcement of the provisions of the ordinance will result in unnecessary hardship, as long as the granting of a variance does not have the effect of granting or increasing any use of property which is prohibited in that zoning district by the shoreland zoning ordinance.

(f) A special exception (conditional use) procedure for uses presenting special problems.

(g) The county shall keep a complete record of all proceedings before the board of adjustment, zoning agency and planning agency.

(h) Written notice to the appropriate district office of the department at least 10 days prior to hearings on proposed variances, special exceptions (conditional uses), appeals for map or text interpretations, and map or text amendments, and submission to the same office of the department of copies of decisions on variances, special exceptions (conditional uses), appeals for map or text interpretations, and map or text amendments within 10 days after they are granted or denied.

(i) Mapped zoning districts and the recording, on an official copy of such map, of all district boundary amendments.

(j) The establishment of appropriate penalties for violations of various provisions of the ordinance, including forfeitures. Compliance with the ordinance shall be enforceable by the use of injunctions to prevent or abate a violation, as provided in s. 59.97 (11), Stats.

(k) The prosecution of violations of the shoreland ordinance.

History: Cr. Register, July, 1980, No. 295, eff. 8-1-80; r. and recr. (2) (a) 6, (2) (c) 3, 5, 7, 9, 10, (3) (d), (3) (e) 11, and cr. (2) (c) 11, and 12, Register, October, 1980, No. 298, eff. 11-1-80.

**NR 115.06 Department duties.** (1) ASSISTANCE TO COUNTIES. To the full extent of its available resources, the department shall provide advice and assistance to counties in the development, adoption, administration and enforcement of their shoreland zoning and land division ordinances, seeking the highest practicable degree of uniformity consistent with the shoreland protection objectives found in s. 144.26, Stats. As a part of this effort, the department shall prepare a model shoreland zoning ordinance.

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(e) *Nonconforming uses.* 1. Under s. 59.97 (10), Stats., the continuation of the lawful use of a building, structure or property, existing at the time an ordinance or ordinance amendment takes effect, which is not in conformity with the provisions of the ordinance or amendment, including routine maintenance of such a building or structure, shall not be prohibited, but the alteration of, addition to, or repair, over the life of the building or structure, in excess of 50% of the equalized assessed value of an existing nonconforming building or structure may be prohibited. If a county prohibits alteration, addition or repair in excess of 50% of the equalized assessed value of an existing nonconforming building or structure, the property owner may either appeal the decision to the county board of adjustment and seek court review if the board's determination is unfavorable, under ss. 59.99 (4) and 59.99 (10), Stats., or petition to have the property rezoned under s. NR 115.05 (2) (e) Wis. Adm. Code and s. 59.97 (5) (e), Stats.

2. The continuance of the nonconforming use of a temporary structure may be prohibited.

3. If a nonconforming use is discontinued for a period of 12 months, any future use of the building, structure or property shall conform to the ordinance.

4. The maintenance and repair of nonconforming boathouses which extend beyond the ordinary high-water mark of any navigable waters shall be required to comply with s. 30.121, Stats.

(4) ESTABLISHMENT OF LAND DIVISION REVIEW. Each county shall review, pursuant to s. 236.45, Stats., all land divisions in shoreland areas which create 3 or more parcels or building sites of 5 acres each or less within a 5-year period. In such review the following factors should be considered:

(a) Hazards to the health, safety or welfare of future residents.

(b) Proper relationship to adjoining areas.

(c) Public access to navigable waters, as required by law.

(d) Adequate storm drainage facilities.

(e) Conformity to state law and administrative code provisions.

(5) ESTABLISHMENT OF SANITARY REGULATIONS. Each county shall adopt sanitary regulations for the protection of health and the preservation and enhancement of water quality.

(a) Where public water supply systems are not available, private well construction shall be required to conform to ch. NR 112, Wis. Adm. Code.

(b) Where a public sewage collection and treatment system is not available, design and construction of private sewage disposal systems shall, prior to July 1, 1980, be required to comply with s. H 62.20, Wis. Adm. Code, and after June 30, 1980, be governed by a private sewage system ordinance adopted by the county under s. 59.065, Stats.

(6) Adoption of administrative and enforcement provisions. The shoreland ordinance adopted by each county shall provide for:

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nance which counties may use in meeting the requirements of s. 59.971, Stats., and this chapter.

(2) REVIEW AND APPROVAL OF SHORELAND ZONING AND LAND DIVISION ORDINANCES. (a) Compliance with the requirements of s. 59.971, Stats., will be determined by the department by comparing the shoreland zoning and land division ordinance that has been enacted by a county with the minimum standards for shoreland regulation contained in section NR 115.05, Wis. Adm. Code. The department shall issue a certificate of compliance when a county has, in the opinion of the department, complied with s. 59.971, Stats., and this chapter.

(b) The department shall periodically reevaluate shoreland zoning and land division ordinances to ascertain their continuing compliance with s. NR 115.05, Wis. Adm. Code. A county shall keep its shoreland ordinance current, effective and workable to retain its status of compliance.

(c) The department shall review all proposed amendments to shoreland-wetland zoning districts pursuant to NR 115.05 (2) (e) 5, Wis. Adm. Code, to ensure that an ordinance which is amended as proposed will retain its status of compliance with s. 59.971, Stats., and this chapter.

(3) DETERMINATION OF NONCOMPLIANCE. (a) Counties which do not have a shoreland zoning and land division ordinance in effect shall be deemed to be in noncompliance with s. 59.971, Stats., and this chapter. The department shall, pursuant to s. 59.971 (6), Stats., adopt an ordinance, after notice and hearing, if a county fails to either:

1. Proceed with the drafting and enactment of shoreland regulations within a given time period, or;
2. Contract with a consultant to draft the regulations within a given time period, or;
3. Cooperate with the staff of the department to draft the shoreland ordinance to be enacted by the county within a given time period. All costs for such action by the department shall be borne by the noncomplying county.

(b) Counties which have shoreland zoning and land division ordinances that do not meet the minimum standards contained in section NR 115.05, Wis. Adm. Code, shall be deemed to be in noncompliance with the requirements of s. 59.971, Stats., and this chapter. If a county fails to modify its ordinance to meet the minimum standards within 6 months after receipt of final Wisconsin wetland inventory maps for that county, the department shall adopt an ordinance for the county, after notice and hearing, pursuant to s. 59.971 (6), Stats.

(4) MONITORING. It is the responsibility of the department, to aid in the fulfillment of the state's role as trustee of its navigable waters, to monitor the administration and enforcement of shoreland zoning and land division ordinances. In so doing, the department:

(a) Shall review decisions granting special exceptions (conditional uses) variances and appeals to ensure compliance with the applicable shoreland zoning ordinances and this chapter;

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(b) May appeal the actions of county zoning officials to county boards of adjustment, under s. 59.99 (4), Stats.; and

(c) May seek court review of the decisions of boards of adjustment, under s. 59.99 (10), Stats.

History: Cr. Register, July, 1980, No. 295, eff. 9-1-80; am. (3) (b), Register, October, 1980, No. 298, eff. 11-1-80

The following pages list amendments that counties can use to revise their existing shoreland protection ordinance. The amendments were prepared by the DNR, and address the recent revisions to NR 115 requiring regulation of wetlands in shoreland areas.

MODEL SHORELAND - WETLAND  
ZONING ORDINANCE  
AMENDMENTS

Wisconsin Department of Natural Resources  
Bureau of Water Regulation and Zoning

1982

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MODEL SHORELAND - WETLAND ZONING ORDINANCE

COMMENTARY

The following is a list of shoreland zoning ordinance provisions which may be used to bring existing shoreland ordinances into compliance with the new requirements of Chapter NR 115, Wisconsin Administrative Code, which became effective on November 1, 1980. Every Wisconsin county is required to incorporate these or comparable provisions into its shoreland zoning ordinance within six months after receiving final Wisconsin Wetland Inventory maps from the Department of Natural Resources. Most of these suggested ordinance provisions deal with the regulation of wetlands in the shoreland area, but some apply to the entire shoreland area as well.

This commentary is intended to explain portions of the Model Shoreland Wetland Ordinance. It should be used to understand the changes in NR 115, but it is not meant to be adopted as part of a county's shoreland ordinance.

I. ADD THE FOLLOWING DEFINITIONS TO THE DEFINITIONS SECTION OF THE SHORELAND ORDINANCE:

County Zoning Agency means that committee or commission created or designated by the County Board under section 59.97(2)(a), Wisconsin Statutes, to act in all matters pertaining to county planning and zoning.

Department means the Department of Natural Resources.

Drainage system means one or more artificial ditches, tile drains or similar devices which collect surface runoff or groundwater and convey it to a point of discharge.

I. DEFINITIONS SECTION

The definitions are intended to clarify the ordinance and provide for uniform enforcement. As such, it is important that they be included in each county's shoreland-wetland zoning ordinance. (Hopefully, they are self-explanatory!)

## MODEL ORDINANCE

## COMMENTARY

Floodplain means the land which has been or may be hereafter covered by flood water during the regional flood. The floodplain includes the floodway and the flood fringe as those terms are defined in Chapter NR 116, Wisconsin Administrative Code.

Navigable waters means Lake Superior, Lake Michigan, all natural inland lakes within Wisconsin and all streams, ponds, sloughs, flowages and other waters within the territorial limits of this state, including the Wisconsin portion of boundary waters, which are navigable under the laws of this state. Under section 144.26(2)(d), Wisconsin Statutes, notwithstanding any other provision of law or administrative rule promulgated thereunder, shoreland ordinances required under section 59.971, Wisconsin Statutes., and Chapter NR 115, Wisconsin Administrative Code, do not apply to lands adjacent to farm drainage ditches if:

- (1) Such lands are not adjacent to a natural navigable stream or river;
- (2) Those parts of such drainage ditches adjacent to such lands were nonnavigable streams before ditching or had no previous stream history; and
- (3) Such lands are maintained in nonstructural agricultural use.

NOTE: Many areas identified as wetlands on the Wisconsin Wetland Inventory maps may also be navigable waters, regulated by Chapters 30 and 31, Wisconsin Statutes, since they are located below the ordinary highwater mark of adjoining lakes or streams.

NOTE: In *Muench v. Public Service Commission*, 261 Wis. 492 (1952), the Wisconsin Supreme Court held that a stream is navigable in fact if it is capable of floating any boat skiff, or canoe of the shallowest draft used for recreational purposes. In *DeGayner and Co., Inc. v. Department of Natural Resources*, 70 Wis.2d 936 (1975), the court also held that a stream need not be navigable in its normal or natural condition to be navigable in fact. The DeGayner opinion indicates that it is proper to consider artificial conditions, such as beaver dams, where such conditions have existed long enough to make a stream useful as a highway for recreation or commerce, and to consider ordinarily recurring seasonal fluctuations, such as spring floods, in determining the navigability of a stream.

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Ordinary highwater mark means the point on the bank or shore up to which the presence and action of surface water is so continuous as to leave a distinctive mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristics.

Regional flood means a flood determined to be representative of large floods known to have generally occurred in Wisconsin and which may be expected to occur on a particular stream because of like physical characteristics, once in every 100 years.

Shorelands means lands within the following distances from the ordinary highwater mark of navigable waters: 1,000 feet from a lake, pond or flowage; and 300 feet from a river or stream or to the landward side of the floodplain, whichever distance is greater.

Shoreland-wetland zoning district means the zoning district, created as a part of this Shoreland Zoning Ordinance, comprised of shorelands that are designated as wetlands on the wetland maps which have been adopted and made a part of this Ordinance.

Special exception (conditional use) means a use which is permitted by this Ordinance provided that certain conditions specified in the Ordinance are met and that a permit

NOTE: Where the bank or shore at any particular place is of such character that it is difficult or impossible to ascertain where the point of ordinary highwater mark is, recourse may be had to the opposite bank of a stream or to other places on the shore of a lake or flowage to determine whether a given stage of water is above or below the ordinary highwater mark.

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is granted by the Board of Adjustment or, where appropriate, the Planning and Zoning Committee or County Board.

Unnecessary hardship means that circumstance where special conditions, which were not self-created, affect a particular property and make strict conformity with restrictions governing area, setbacks, frontage, height or density unnecessarily burdensome or unreasonable in light of the purposes of this Ordinance.

Variance means an authorization granted by the Board of Adjustment to construct, alter or use a building or structure in a manner that deviates from the requirements of this Ordinance.

Wetlands means those areas where water is at, near or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation and which have soils indicative of wet conditions.



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II. INSERT IN THE COMPLIANCE OR APPLICABILITY SECTION OF THE SHORELAND ORDINANCE:

Unless specifically exempted by law, all cities, villages, towns, and counties are required to comply with this Ordinance and obtain all necessary permits. State agencies are required to comply when section 13.48(13), Wisconsin Statutes, applies. The construction, reconstruction, maintenance and repair of state highways and bridges by the Wisconsin Department of Transportation are exempt when section 30.12(4)(a), Wisconsin Statutes, applies.

COMMENTARY

II. COMPLIANCE OR APPLICABILITY SECTION

All local units of government must comply with the requirements of local shoreland zoning ordinances, unless specifically exempted by statute.

Local zoning ordinances are applicable to buildings and facilities constructed for the use of state agencies, although such construction is exempt from other local ordinances, such as building codes.

State highways and bridges that are constructed and maintained by the Wisconsin Department of Transportation (DOT) are exempt from the requirements of local zoning ordinances, provided that the DOT notifies the Department of Natural Resources (DNR) of any activity affecting the waters of the state (section 30.12(4)(a), Wisconsin Statutes). Such work must be done in compliance with the DNR-DOT interagency agreement.

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III. AMEND THE EXISTING JURISDICTION SUBSECTION OF THE SHORELAND ORDINANCE TO READ:

III. EXISTING JURISDICTION SUBSECTION

Section \_\_\_\_ .0 General Provisions

\_\_\_\_.1 Areas to be regulated. Areas regulated by this Ordinance shall include all the lands (referred to herein as shorelands) in the unincorporated areas of \_\_\_\_\_ County which are:

\_\_\_\_.11 Within one thousand (1,000) feet of the ordinary highwater mark of navigable lakes, ponds or flowages. Lakes, ponds or flowages in \_\_\_\_\_ County shall be presumed to be navigable if they are listed in the Wisconsin Department of Natural Resources publication "Surface Water Resources of \_\_\_\_\_ County" or shown on USGS maps. If evidence to the contrary is presented, the County Zoning Administrator shall make the initial determination whether or not the lake, pond or flowage in question is navigable under the laws of this state. The County Zoning Administrator shall also make the initial determination of the location of the ordinary highwater mark.

Any lake, pond or flowage listed in "Surface Water Resources of \_\_\_\_\_ County" is presumed navigable for purposes of enforcing ordinances containing this provision regarding navigability. When someone argues that a particular lake, pond or flowage is not navigable, the county zoning administrator shall examine the site and make a decision whether or not it is navigable according to Wisconsin common law, summarized in the Note following section NR 115.03(5)(c), Wisconsin Administrative Code. The zoning administrator shall also make the initial determination of the location of the ordinary highwater mark.

If unable to reach a decision, the zoning administrator shall request the Department of Natural Resources district water management staff to make an on-site determination of navigability, to determine the location of the ordinary highwater mark, or both.

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.12 Within three hundred (300) feet of the ordinary highwater mark of navigable rivers or streams, or to the landward side of the floodplain, whichever distance is greater. Rivers and streams in County shall be presumed to be navigable if they are designated as either continuous or intermittent waterways on the United States Geological Survey quadrangle maps or other zoning base maps which have been incorporated by reference and made a part of this Ordinance in section \_\_\_\_ of this Ordinance. If evidence to the contrary is presented, the County Zoning Administrator shall make the initial determination whether or not the river or stream in question is navigable under the laws of this state. The County Zoning Administrator shall also make the initial determination of the location of the ordinary highwater mark. When questions arise, the County Zoning Administrator shall contact the appropriate district DNR office for a determination of navigability or ordinary highwater mark. Flood Hazard Boundary maps, or Flood Insurance Study maps (or soil maps or other existing county maps used to delineate floodplain areas), which have been adopted by County, shall be used to determine the extent of the floodplain of rivers or streams in \_\_\_\_\_ County.

COMMENTARY

Rivers and streams designated as continuous (year-round) or intermittent (seasonal) waterways are considered navigable for purposes of enforcing ordinances containing this provision regarding navigability. Questions concerning the navigability of any river or stream shall be resolved by the county zoning administrator and DNR district water management staff, as outlined above.

MODEL ORDINANCE

COMMENTARY

.2 Locating shoreland-wetlands boundaries. When an apparent discrepancy exists between the shoreland-wetland district shown on the official wetlands inventory maps and actual field conditions at the time the maps were adopted, the zoning administrator shall contact the appropriate field office of the Department to determine if the shoreland-wetland district as mapped is in error. If the Department staff concur with the zoning administrator that a particular area was incorrectly mapped as a wetland, the zoning administrator shall have the authority to immediately grant or deny a land use permit in accordance with the regulations applicable to the correct zoning district.

In order to correct wetland mapping errors shown on the official zoning map, the zoning administrator shall be responsible for initiating a shoreland-wetland map amendment within a reasonable period of time.

IV. CREATE A SHORELAND-WETLAND DISTRICT SECTION (AMENDING OR REPEALING ANY EXISTING CONSERVANCY DISTRICT SECTION AS NECESSARY):

Section \_\_\_\_\_.0 Shoreland-Wetland District

Each map change may be handled separately or may be combined with other proposed text or map amendments, as long as the amendment process is started within a reasonable period of time.

In order to distinguish between errors in mapping and illegal developments of correctly mapped wetlands which occurred after the adoption of the wetland maps, the Model Ordinance requires the zoning administrator to compare the maps with "actual field conditions at the time the maps were adopted."

IV. SHORELAND-WETLAND DISTRICT SECTION

MODEL ORDINANCE

.1 Designation. This district shall include all shorelands within the jurisdiction of this Ordinance which are designated as wetlands on the Wetlands Inventory maps that have been adopted and made a part of the Ordinance and are on file in the office of the \_\_\_\_\_ for \_\_\_\_\_ County.

COMMENTARY

Under NR 115, counties must establish a special type of zoning district for wetlands in shoreland areas. Counties will continue to have the option to retain or create conservancy zoning for wetlands outside shoreland areas, as well.

The adoption procedures for Wetland Inventory Maps are spelled out in NR 115.05(2)(a) and (b). DNR will prepare the final maps after review by the county. The county may adopt these maps without change or may amend the maps following rezoning procedures, either at the time of adoption or at a later time.

NR 115 provides that some shoreland-wetlands will not be regulated if they are rezoned at the time the county adopts this ordinance. To exclude certain wetlands from regulation, a county must give notice of the proposed exclusion in the hearing notice for ordinance adoption. This can be done by including a statement in the public notice as to where the wetland maps showing the excluded areas are available for review. In addition, the DNR district office must agree that the rezoning will not have a significant adverse impact on the wetland values listed in NR 115.05(2)(e)4. This procedure is intended to reduce the number of individual rezoning actions initiated after ordinance adoption, not to weaken regulation of shoreland-wetlands by allowing a county to exempt wetlands indiscriminately.

MODEL ORDINANCE

2. Purpose. This Ordinance is adopted to maintain safe and healthful conditions, to prevent water pollution, to protect fish spawning grounds and wildlife habitat, to preserve shore cover and natural beauty and to control building and development in wetlands whenever possible. When development is permitted in a wetland, the development should occur in a manner that minimizes adverse impacts upon the wetland.

COMMENTARY

Wetlands are defined in NR 115 as areas where water is at, near or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation and which have soils indicative of wet conditions. This differs from the definition included in many existing shoreland ordinances. Care should be taken to ensure that all references to the wetlands definition are consistent with NR 115.

Wetlands provide valuable fish spawning grounds and wildlife habitat and help maintain the ecological balance of a watercourse. Development of wetland areas should be limited in order to preserve these functions. Wetlands are seldom suitable for building or development for the following reasons:

- (a) Septic tank systems will not function because of high groundwater;
- (b) Water supplies are often polluted by septic tank wastes that have not been adequately absorbed by the soil;
- (c) Foundations and roads crack due to poor support capabilities and frost action; and

3 Permitted Uses. The following uses shall be allowed, subject to general shoreland zoning regulations in sections            through            of this Ordinance, the provisions of Chapters 30 and 31 of the Wisconsin Statutes, and the provisions of other state and federal laws, if applicable:

- 31 Activities and uses which do not require the issuance of a zoning permit, but which must be carried out without filling, flooding, draining, dredging, ditching, tiling or excavating:
  - (1) Hiking, fishing, trapping, hunting, swimming and boating;
  - (2) The harvesting of wild crops, such as marsh hay, ferns, moss, wild rice, berries, tree fruits and tree seeds, in a manner that is not injurious to the natural reproduction of such crops;
  - (3) The practice of silviculture, including the planting, thinning and harvesting of timber;
  - (4) The pasturing of livestock and the construction and maintenance of fences;
  - (5) The cultivation of agricultural crops;
  - (6) The construction and maintenance of duck blinds;

(d) Flooding is common in spring and other times of high water.

Filling rarely solves all these problems. A wetland often cannot be safely developed, even at great expense.

NR 115.05(2)(c) lists in detail the activities that are allowed in shoreland-wetland areas. These activities must not involve filling, flooding, draining, dredging, ditching, tiling or excavating, except that NR 115.05(2)(c)3 and 5 allow the following:

- (a) Temporary water level stabilization measures to allow growing and harvesting of trees;
- (b) Dikes, dams and ditches necessary for cranberry growing; or
- (c) Maintenance of existing drainage systems, only to the extent that maintenance is necessary to continue the existing agricultural use.

In addition, these permitted activities must be carried out according to:

- (a) NR 115.05(3) which establishes minimum standards for zoning in shoreland areas in general;

MODEL ORDINANCE

COMMENTARY

- (7) The construction and maintenance of piers, docks and walkways, including those built on pilings; and
- (8) The maintenance, repair replacement and reconstruction of existing town and county highways and bridges.

.32 Uses which do not require the issuance of a zoning permit and which may involve filling, flooding, draining, dredging, ditching, tiling, or excavating to the extent specifically provided below:

- (1) Temporary water level stabilization measures, in the practice of silviculture, which are necessary to alleviate abnormally wet or dry conditions that would have an adverse impact on the conduct of silvicultural activities if not corrected;
- (2) Dike and dam construction and ditching for the purpose of growing and harvesting cranberries; and
- (3) Ditching, tiling, dredging, excavating or filling done to maintain or repair existing agricultural drainage systems only to the extent necessary to maintain the level of drainage required to continue the existing agricultural use.

- (b) Chapters 30 and 31, Wisconsin Statutes, which regulate navigable waters, harbors, dams and bridges; and
- (c) Any other state or federal laws that apply, including regulations of the U.S. Army Corps of Engineers.



.33 Uses which are allowed upon the issuance of a zoning (land use) permit:

(1) The construction and maintenance of roads which are necessary to conduct silvicultural activities or are necessary for agricultural cultivation, provided that:

(a) The road cannot as a practical matter be located outside the wetland; and

(b) The road is designed and constructed to minimize the adverse impact upon the natural functions of the wetland and meets the following standards:

(1) The road shall be designed and constructed as a single lane roadway with only such depth and width necessary to accommodate the machinery required to conduct agricultural and silvicultural activities;

(2) Road construction activities are to be carried out in the immediate area of the roadbed only; and

NR 115 states that certain wetland activities must be performed in a way that meets specified standards. To insure that the zoning administrator can enforce these standards, the Model Ordinance requires the property owner to obtain a zoning permit before beginning such a project. The permit process serves several purposes by:

(a) Giving the zoning administrator the opportunity to notify the property owner of the wetland development standards in NR 115;

(b) Notifying the zoning administrator of the property owner's intent in time to determine whether the development can practically be located outside the wetland; and

(c) Putting the zoning administrator on notice that a project will require monitoring as it is completed to be sure it complies with the standards in NR 115.

- (3) Any filling, flooding, draining, dredging, ditching, tilling or excavating that is to be done must be necessary for the construction or maintenance of the road;
- (2) The construction and maintenance of nonresidential buildings used solely in conjunction with raising of waterfowl, minnows or other wetland or aquatic animals or used solely for some other purpose which is compatible with wetland preservation, if such building cannot as a practical matter be located outside the wetland, provided that:
  - (a) Any such building does not exceed 500 square feet in floor area; and
  - (b) No filling, flooding, draining, dredging, ditching, tilling or excavating is to be done;
- (3) The establishment and development of public and private parks and recreation areas, boat access sites, natural and outdoor education areas, historic and scientific areas, wildlife refuges, game preserves and private wildlife habitat areas, provided that:
  - (a) Any private recreation or wildlife habitat area must be used exclusively for that purpose;

Certain excavating work is permissible for the foundation provided the excavated material is disposed of, or back-filled properly.

NR 115.05(2)(c)9 specifically requires that the owner or operator of any new private recreation or wildlife area must notify the county's zoning committee of the proposed project before beginning construction. Filing a permit application with the zoning administrator would accomplish this requirement.

- (b) No filling is to be done; and
- (c) Ditching, excavating, dredging, dike and dam construction may be done in wildlife refuges, game preserves and private wildlife habitat areas, but only for the purpose of improving wildlife habitat or to otherwise enhance wetland values.
- (4) The construction and maintenance of electric, gas, telephone, water and sewer transmission and distribution lines, and related facilities, by public utilities and cooperative associations organized for the purpose of producing or furnishing heat, light, power or water to their members, provided that:
- (a) The transmission and distribution lines and related facilities cannot as a practical matter be located outside the wetland; and
- (b) Any filling, excavating, ditching or draining that is to be done must be necessary for such construction or maintenance and must be done in a manner designed to minimize flooding and other adverse impacts upon the natural functions of the wetlands.

Limited filling and grading is allowed for the development of boat launching sites and for the construction of various park shelters and related facilities provided such development has no significant adverse impact on the natural functions of the wetland.

NR 115 references section 196.491(3), Wisconsin Statutes, which regulates the granting of a Certificate of Public Convenience and Necessity to any large electrical generating facility by the Public Service Commission. This section provides that the installation and use of such a facility may proceed if a Certificate has been granted, even though local ordinances would restrict its operation (section 196.491(3)(i), Wisconsin Statutes). In other words, a public utility that is planning to build an electrical generating plant in a shoreland-wetland area cannot be stopped by a shoreland ordinance if it has properly been granted a Certificate of Public Convenience and Necessity. However, section 196.491(3)(j), Wisconsin Statutes provides that any person or local government whose rights are adversely affected may petition for judicial review under chapter 227, Wisconsin Statutes.

(5) The construction and maintenance of railroad lines, provided that:

- (a) The railroad lines cannot as a practical matter be located outside the wetland; and
- (b) Any filling, excavating, ditching, or draining that is to be done must be necessary for such construction or maintenance and must be done in a manner designed to minimize flooding and other adverse impacts upon the natural functions of the wetland.

    .4 Prohibited Uses. Any use not listed in sections     .31,     .32 or     .33 is prohibited, unless the wetland or a portion of the wetland has been rezoned by amendment of this Ordinance in accordance with section 59.97(5)(e), Wisconsin Statutes, chapter NR 115, Wisconsin Administrative Code, and section     .5 of this Ordinance.

    .5 Rezoning of Lands in the Shoreland-Wetland Zoning District.

Any use of a shoreland-wetland area that is not specifically allowed by NR 115 is prohibited. Conditional uses or variances cannot be granted to allow a property owner to use a shoreland-wetland area in any way that is not specified. The only alternative for the property owner who wants to carry out a prohibited use is to petition the county to rezone the property to remove that wetland from the shoreland-wetland district.

.51 For all proposed text and map amendments to the shoreland-wetland district, the appropriate district office of the Department of Natural Resources shall be provided with the following:

- (1) A copy of every petition for a text or map amendment to the shoreland-wetland district, within 5 days of the filing of such petition with the County Clerk;
- (2) Written notice of the public hearing to be held on a proposed amendment, at least 10 days prior to such hearing;
- (3) A copy of the County Zoning Agency's findings and recommendations on each proposed amendment, within 10 days after the submission of those findings and recommendations to the County Board; and
- (4) Written notice of the County Board's decision on the proposed amendment, within 10 days after it is issued.

Official zoning amendments are required for any change in shoreland-wetland zoning. Amendments to the ordinance text or map may be adopted at any time after passage of the ordinance by the County Board. The procedure for amending any county zoning ordinance is spelled out in section 59.97(5)(e), Wisconsin Statutes. In addition, NR 115 requires that the appropriate district DNR office receive copies of all written petitions, notices and findings resulting from any rezoning in a shoreland-wetland area.

MODEL ORDINANCE

COMMENTARY

.52 A wetland, or a portion thereof, in the shoreland-wetland district shall not be rezoned if the proposed rezoning may result in a significant adverse impact upon any of the following:

- (1) Storm and flood water storage capacity;
- (2) Maintenance of dry season stream flow, the discharge of groundwater to a wetland, the recharge of groundwater from a wetland to another area, or the flow of groundwater through a wetland;
- (3) Filtering or storage of sediments, nutrients, heavy metals or organic compounds that would otherwise drain into navigable waters;
- (4) Shoreline protection against soil erosion;
- (5) Fish spawning, breeding, nursery or feeding grounds;

When a county zoning committee receives a petition to rezone a shoreland-wetland area, they must consider the environmental impact of the rezoning on the wetland. If they feel that there will be a significant adverse impact on any of the wetland functions listed in NR 115.05(2)(e)4, the committee shall recommend denial of the rezoning. The district DNR office must also review the rezoning petition for its environmental impact. If the DNR determines that the proposal may have a significant adverse impact on wetland functions, it must notify the zoning committee before or at the public hearing held on the rezoning amendment. If the county board adopts a rezoning amendment in spite of the DNR's negative recommendation, the amendment does not become effective for at least 30 days. During that time the DNR may initiate the adoption of a superseding shoreland ordinance for the county, according to section NR 115.05(2)(e)9, Wisconsin Administrative Code, and section 59.971(6), Wisconsin Statutes.

MODEL ORDINANCE

COMMENTARY

- (6) Wildlife habitat; or
- (7) Areas of special recreational, scenic or scientific interest, including scarce wetland types.

Some of the criteria that the district DNR office may use to determine the impact of a proposed rezoning are summarized below:

- (a) Does the wetland provide significant wildlife or fish habitat or contain endangered plant or animal species?
- (b) How will development of the wetland affect soil stability and erosion, groundwater pollution, storm water runoff or flood control?
- (c) Will development significantly affect recreation, scientific or cultural interests?
- (d) Are there other scarce natural resources in the area which would be adversely affected by development in the wetland?
- (e) Does the applicant have reasonable alternatives which will not adversely affect the wetland?
- (f) Is the project dependent on being located in a wetland or is it simply more convenient or economical to locate there?

In weighing the impact on the wetland, the DNR will place the emphasis of their review on protecting the wetland. The petitioner must prove that the rezoning is necessary.

.53 If the Department of Natural Resources has notified the County Zoning Agency that a proposed amendment to the shoreland-wetland district may have a significant adverse impact upon any of the criteria listed in section .52 of this Ordinance, that amendment, if approved by the County Board, shall contain the following provision:

"This amendment shall not take effect until more than 30 days have elapsed since written notice of the County Board's approval of this amendment was mailed to the Department of Natural Resources. During that 30-day period the Department of Natural Resources may notify the County Board that it will adopt a superseding shoreland ordinance for the county under section 59.971(6) of the Wisconsin Statutes. If the Department does so notify the County Board, the effect of this amendment shall be stayed until the section 59.971(6) adoption procedure is completed or otherwise terminated."

If the DNR recommends granting a petition or chooses not to respond before or at the public hearing, the county board may either grant or deny the petition. In this case, the DNR would take no further action. If the property owner wishes to challenge the denial of the petition by the county board, it can be appealed to the circuit court.

On the other hand, the county board may adopt a rezoning petition that the DNR has recommended against. Usually this would be an amendment to the shoreland zoning map, which is defined as part of the shoreland ordinance. In some cases, however, the text of the ordinance may be altered as well. When an amendment is adopted against the DNR's recommendation, it does not become effective until 30 days after the county board has mailed written notice of its decision to the DNR district office. During this 30-day period the DNR may notify the county board that it intends to adopt a superseding shoreland ordinance because the amended ordinance is no longer in compliance with NR 115. The DNR could reinstate the ordinance as it was prior to the rezoning amendment, unless the ordinance contained other provisions that did not comply with NR 115. In that case, more extensive revisions would be included in the superseding ordinance. (The DNR authority to adopt a superseding ordinance is set forth in section 59.971(6), Wisconsin Statutes.)



MODEL ORDINANCE

COMMENTARY

- V. ADD THE FOLLOWING PROVISION TO THE WATER SETBACK SECTION OF THE SHORELAND ORDINANCE:

The use of a boathouse for human habitation and the construction or placing of a boathouse below the ordinary highwater mark of any navigable waters are prohibited.

- V. WATER SETBACK SECTION

Because this provision regulating boathouses in shoreland areas was not explicitly stated in the original Model Shoreland Ordinance (Wisconsin's Shoreland Protection Ordinance, 1967), it is included here. Some county ordinances may already include this provision, and no change is needed. Those counties whose ordinances do not contain this section should revise the Water Setback Section to include it.

Habitation of boathouses is prohibited because residential buildings must be set back 75 feet from the shore. Construction of boathouses below the ordinary highwater mark is prohibited to make NR 115 consistent with section 30.121, Wisconsin Statutes, as created by Chapter 101, Laws of 1979.

MODEL ORDINANCE

VI. AMEND THE FILLING, GRADING, LAGOONING AND DREDGING SECTION OF THE SHORELAND ORDINANCE TO READ:

Section     .0 Filling, Grading, Lagooning, Dredging, Ditching and Excavating.

    .1 Only filling, grading, lagooning, dredging, ditching or excavating that is done in a manner designed to minimize erosion, sedimentation and impairment of fish and wildlife habitat may be permitted in the shoreland area.

    .2 Filling, grading, lagooning, dredging, ditching or excavating in a shoreland-wetland district may be permitted only if the requirements of sections     .32 and     .33 of this Ordinance are met.

    .3 A state or federal permit may be required, in addition to a permit under this Ordinance, if state or federal laws are applicable to the filling, grading, lagooning, dredging, ditching or excavating that is proposed.

COMMENTARY

VI. FILLING, GRADING, LAGOONING AND DREDGING SECTION

NR 115.05(3)(d) spells out the provisions for filling, grading, lagooning, dredging, ditching or excavating in a shoreland area. These are:

- (a) The activity must be done in a way that minimizes erosion, sedimentation and harm to fish and wildlife habitat.
- (b) The use must be allowed under NR 115.05(2) and must be carried out as specified in that section; and
- (c) The person conducting the activity is responsible for obtaining any other state or federal permits that are required. In most cases, the county zoning administrator and district DNR staff will have the necessary information if additional permits are necessary.

NOTE: If the county's existing shoreland ordinance requires the issuance of a land use or conditional use permit for filling, grading, lagooning, dredging, ditching or excavating in shoreland areas, it should be amended, as necessary, to be consistent with NR 115.05(2)(c). This section spells out permissible uses in shoreland-wetland areas and allows filling, grading, lagooning, dredging, ditching or excavating without a permit, provided that the specified circumstances are met.

MODEL ORDINANCE

COMMENTARY

VII. CREATE A NONCONFORMING USES SECTION (OR AMEND AN EXISTING NONCONFORMING USES SECTION) TO READ:

Section \_\_\_\_ .0 Nonconforming Uses.

    .1 The lawful use of a building, structure or property existing at the time this Ordinance or Ordinance Amendment takes effect, which is not in conformity with the provisions of this Ordinance including the routine maintenance of such a building or structure, may be continued subject to the following conditions:

    .11 If such use is discontinued for twelve (12) consecutive months, any future use of the building, structure or property shall conform to this Ordinance.

    .12 The maintenance and repair of nonconforming boathouses which are located below the ordinary highwater mark of any navigable waters shall comply with the requirements of section 30.121 of the Wisconsin Statutes.

VII. NONCONFORMING USES SECTION

When an ordinance is adopted that restricts an existing lawful use and makes it technically unlawful, such a use must be "grandfathered," that is, allowed to continue as before. However, changes in these nonconforming (grandfathered) uses are limited. This section spells out the conditions under which nonconforming uses in shoreland-wetland areas are allowed to remain. If the property owner wants to make changes other than those allowed, he or she must alter the nonconforming use to meet the conditions of the new ordinance, that is, it must become a conforming use.

Two provisions are stated in NR 115.05(3)(e) that regulate nonconforming uses:

- (a) A use that is discontinued for 12 consecutive months may not be resumed unless it is changed according to the new ordinance; and
- (b) Maintaining and repairing nonconforming boathouses is subject to section 30.121, Wisconsin Statutes, which spells out more detailed regulations than NR 115.

MODEL ORDINANCE

COMMENTARY

.13 Uses which are nuisances shall not be permitted to continue as nonconforming uses.

Note: Sections .13 through .15 of the Model Ordinance amendments are not required by NR 115.05(3)(e), but counties are specifically allowed to adopt these provisions in their shoreland-wetland ordinances.

.14 No structural alteration, addition or repair to any nonconforming building or structure, over the life of the building or structure, shall exceed 50 percent of its equalized assessed value at the time of its becoming a nonconforming use, unless it is permanently changed to a conforming use.

.15 If the alteration, addition or repair in excess of 50 percent of the equalized assessed value of an existing nonconforming building or structure is prohibited, the property owner may still make the proposed alteration, addition or repair if:

Note: If the county chooses to include section .14 it must also include section .15 in its shoreland ordinance.

- (1) The nonconforming building or structure is permanently changed to a conforming use;
- (2) The property owner appeals the determination of the Zoning Administrator, and either the County Board of Adjustment or the Circuit Court find in the property owner's favor under section 59.99(4) or 59.99(10) of the Wisconsin Statutes; or

- (3) The property owner successfully petitions to have the property rezoned under section 59.97(5)(e) of the Wisconsin Statutes and section NR 115.05(2)(e), Wisconsin Administrative Code, if applicable.

VIII. INSERT IN THE ADMINISTRATION SECTION (PREFERABLY IN THE POWERS OF THE BOARD OF ADJUSTMENT SUBSECTION) OF THE SHORELAND ORDINANCE:

.1 No variance from the terms of this Ordinance shall be granted which is contrary to the public interest. A variance may be granted where, owing to special conditions, a literal enforcement of the provisions of this Ordinance will result in unnecessary hardship. The granting of a variance shall not have the effect of granting or increasing any use of property which is prohibited in that zoning district by this Ordinance.

VIII. ADMINISTRATION SECTION

When a property owner is using a shoreland-wetland in an allowable way, but wants an exemption from the dimensional standards regulating that use, he or she must apply for a variance from the county's board of adjustment. A variance cannot be granted to allow a use in a shoreland-wetland district that is not permissible under the ordinance; that requires a rezoning.

A variance from the standards of the ordinance may be granted if:

- (a) The variance will not be contrary to the public interest;
- (b) The standards of the ordinance create unnecessary hardship (not just personal difficulty or inconvenience) for the property owner; and
- (c) The variance does not grant or increase any use of property that is prohibited in that zoning district.

MODEL ORDINANCE

COMMENTARY

IX. INSERT IN THE ADMINISTRATION SECTION OF THE SHORELAND ORDINANCE:

1 Written notice shall be given to the appropriate district office of the Department of Natural Resources at least 10 days prior to hearings on proposed shoreland variances, special exceptions (conditional uses), appeals for map or text interpretations, and map or text amendments.

2 Copies of decisions on shoreland variances, special exceptions (conditional uses), appeals for map or text interpretations, and map or text amendments shall be submitted to the appropriate district office of the Department of Natural Resources within 10 days after they are granted or denied.

IX. ADMINISTRATION SECTION

Each county has the authority to enforce ordinances adopted pursuant to Chapter NR 115, however, the DNR is responsible for monitoring that enforcement. Consequently, the county is required to notify the DNR district office in writing of applications for variances, special exceptions and map and text interpretations and amendments.

County decisions resulting from these applications must also be forwarded to the DNR district office. (NR 115.05(2)(e) spells out these requirements.) This allows the DNR to assess whether or not the county is adhering to the shoreland ordinance it has adopted.

In most situations these procedures will be simply routine, but if a court case develops or DNR disagrees with a county's decision, it is critical for the county and DNR to have a complete record of their decisions prior to the challenge.

# NOTES

The word "NOTES" is rendered in a large, bold, hand-drawn font. Each letter contains a small illustration: the 'N' shows a door with a sign that says "SAUNA"; the 'O' shows a person standing next to a sign that says "PERMIT"; the 'T' shows a person in a suit and tie; the 'E' shows a house with a sign that says "LANE"; and the 'S' shows a sign that says "LANE PERMIT".

# Information and Assistance

**Wisconsin**

**Flooding and Erosion  
Information and  
Technical Assistance**

Coastal Management Program  
Representative  
University of Wisconsin Extension  
Environmental Resource Unit  
1815 University Avenue  
Madison, Wis. 53706  
(608) 262-2106

Southeast Wisconsin Regional Planning  
Commission (SEWRPC)  
Old Courthouse - Box 769  
Waukesha, Wis. 53186  
(414) 547-6721

Bay Lake Planning Commission (BLPC)  
S. E. 450, University of Wisconsin-Green Bay  
Green Bay, Wis. 54302  
(414) 465-2135

Northwest Regional Planning Commission  
(NWRPC)  
201 Second St. West  
Ashland County Courthouse  
Ashland, Wis. 54806

WISCONSIN DEPARTMENT OF  
NATURAL RESOURCES  
DISTRICT OFFICES:  
Lake Michigan District  
1125 N. Military Avenue  
P. O. Box 3600  
Green Bay, Wis. 54303  
(414) 497-4040

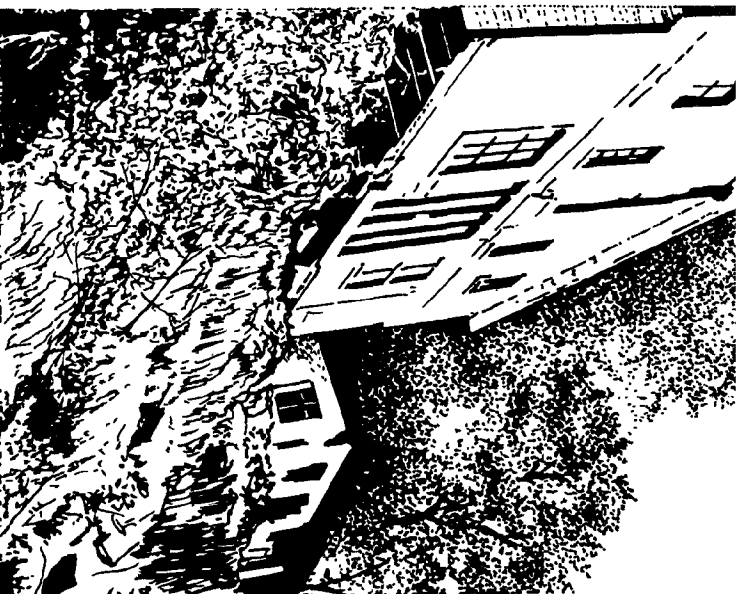
Northwest District  
P. O. Box 309  
Spooner, Wis. 54801  
(715) 635-2101

Southeast District  
9722 W. Watertown Plank Road  
P. O. Box 13228  
Milwaukee, Wis. 53213  
(414) 257-6543



Wisconsin Dept. of Natural Resources  
Box 7921  
Madison, Wisconsin 53707

# What You May Need to Know About Owning Shore Property



DEPARTMENT OF NATURAL RESOURCES



# Questions to Ask Before You Buy

Consumers in the market for shoreline property must ask some sophisticated questions to avoid an unpleasant surprise.

Sellers and agents are not required to disclose erosion risks (although in communities participating in the National Flood Insurance Program, lending institutions must require that a buyer pay for flood insurance before they will give the buyer a mortgage).

Even if disclosure were required, only some purchasers would be affected. Many people acquire shoreline property either through inheritance or seller financing (land contracts), bypassing lending institutions and real estate agencies. For that reason, some coastal specialists say laws should be changed to require disclosure of erosion and flood risks in the property deed.

Unless and until such safeguards are required, however, the prospective property owner should keep these questions in mind.

**Has the area in which the property is situated been mapped for its susceptibility to erosion?** Erosion maps can show whether the property is in an erosion hazard area (generally, an area where erosion advances at 1 foot or more a year). Some state coastal zone programs, including those in Michigan, Wisconsin, and Pennsylvania, have erosion maps.

**How fast is erosion occurring?** If, for example, state officials say the shore is receding at 3 feet a year, a 100-foot lot will be gone in about 33 years.

**Are there any shore protection structures nearby that might interrupt nearshore currents that carry sediments?** Such structures may include breakwaters or large groins that jut out into the water. They interfere with the natural movement of sand along the shore, "starving" downshore beaches.

**How far is any building from the edge of the bluff or bank?** If the shoreline is eroding, a purchaser will need to know how long the property has before the structure crumbles into the lake.

**Can the building be relocated if necessary?** Sometimes this is technically possible; sometimes not. A prospective buyer must consider available space on the property and local zoning restrictions.

**If the building can be relocated, how much will it cost?** Is the cost affordable? Is relocation worth the cost?

**Are there any offshore sand bars?** Sand bars dissipate wave energy, reducing the threat to the beach. Neighbors may know what happened to a sandbar the last time lake levels were high.

**Is the property adequately drained?** If it drains through a bluff along the shore, the buyer should find where the water comes out. Water adds weight to the ground, and weight can decrease a bluff's stability and lead to landslides.

**If it is necessary, is structural protection affordable?** Consult the booklet, *Help Yourself*, published by the U.S. Army Corps of Engineers (see *To Learn More...*). A buyer should consider whether the appearance of a structure will detract from enjoyment of the property.

**Is it possible to stabilize the shoreline with vegetation?** Consult the publication, *The Role of Vegetation in Shoreline Management* (see *To Learn More...*). It provides alternative ways to use vegetation and other non-structural methods to stabilize some shorelines.

**Will your neighbors collaborate in shoreline protection?** A buyer should ask them. The most efficient protection is for a continuous, uninterrupted stretch of shore. In many cases, each property owner makes his or her own decision. The result is a hodgepodge of different structures that may have cost much more than a single structure whose cost was shared by a group of residents. In other cases, neighbors may not be able to afford shoreline protection—and the buyer's own structure may become useless in a few years as land erodes around it.

**What insurance is available?** Property owners cannot normally obtain erosion insurance, according to David Skarosi, an emergency management specialist for the Federal Emergency Management Agency. Flood insurance, on the other hand, may be required if the property is in a flood plain. If it is not, but if the community participates in the National Flood Insurance Program, a property owner facing erosion can still buy flood insurance and hope that the erosion can be blamed on flooding or suddenly high levels.

Prospective owners may be able to answer some of these questions by asking neighbors, the agent selling the property, or an expert associated with the County Extension Service or a Sea Grant institution. Other questions will require the prospective owner to inspect the site.

David Staats □

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## To Learn More...

... about flooding and erosion around the Great Lakes, consult the following sources:

*Fact Sheet.* Great Lakes Basin Commission, **Coastal Hazards**. 1980: 2 pp. Great Lakes Basin Commission, P.O. Box 999, Ann Arbor, Mich. 48106. Free.

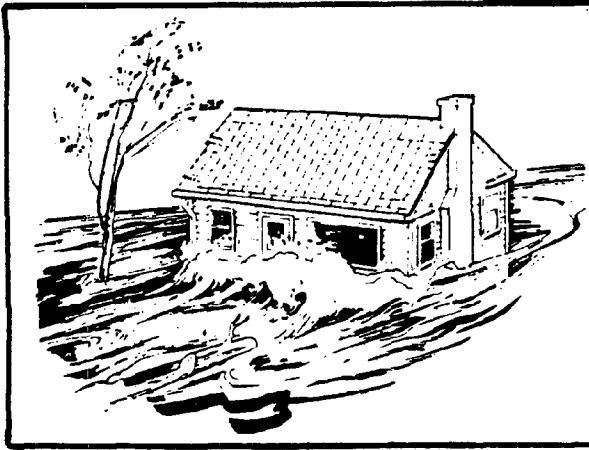
*Booklet.* Great Lakes Basin Commission, **The Role of Vegetation in Shoreline Management**. 36 pp. A guide to help shoreline property owners identify and correct shoreline bluff erosion problems using vegetation. Great Lakes Basin Commission, address above. Single copies free.

*Brochure.* Illinois Coastal Zone Management Program, **Harmony with the Lake: Guide to Bluff Stabilization**. Division of Water Resources, Illinois Department of Transportation, Room 1010, Marina City Office Building, 300 N. State St., Chicago, Ill. 60610. Free.

*Booklet.* Lake Michigan Federation, **Waves Against the Shore: An Erosion Manual for the Great Lakes Region**. Jan. 1978: 25 pp. Where citizens can obtain help to fight erosion, and what laws govern the building of erosion-control structures. Lake Michigan Federation, 53 W. Jackson Blvd., Suite 1710, Chicago, Ill. 60604. \$1.

*Brochures.* Michigan Sea Grant Program, **Buying Great Lakes Shoreline Property; Shoreline Erosion: What to Do; and Shoreline Erosion: Questions and Answers**. Michigan Sea Grant Program, address above. Free.

*Booklet.* North Central Division, U.S. Army Corps of Engineers, **Help Yourself**. Sept. 1978: 28 pp. A discussion of Great Lakes erosion problems and methods of shore protection. North Central Division, U.S. Army Corps of Engineers, 536 S. Clark St., Chicago, Ill. 60605. Free.



# Flood Facts

Wisconsin Department of Natural Resources  
Bureau of Water Regulation and Zoning  
P.O. Box 7921  
Madison, Wisconsin 53707-7921

## What can we do about floods ?

Floods are the most frequently encountered type of natural disaster.

90% of all Presidential declarations of emergency or major disaster involve flooding - either along the coasts or rivers and streams.

20,000 American communities have flood hazard areas. 7.4 million buildings are located in these flood hazard areas.

Flood damages throughout the nation total \$2-3 billion annually.

Wisconsin communities suffer \$100 million in yearly flood damages.

About 200 Americans lose their lives in floods each year.

Despite efforts of all levels of government to combat floods, annual flood losses continue to increase by 6-7% each year.

The direct and indirect costs of flood recovery are not borne by just the flood victims, but are shared by all American taxpayers.

### The direct costs of floods include:

- rescue and relief efforts
- emergency preparedness
- clean-up operations
- rebuilding public utilities and facilities



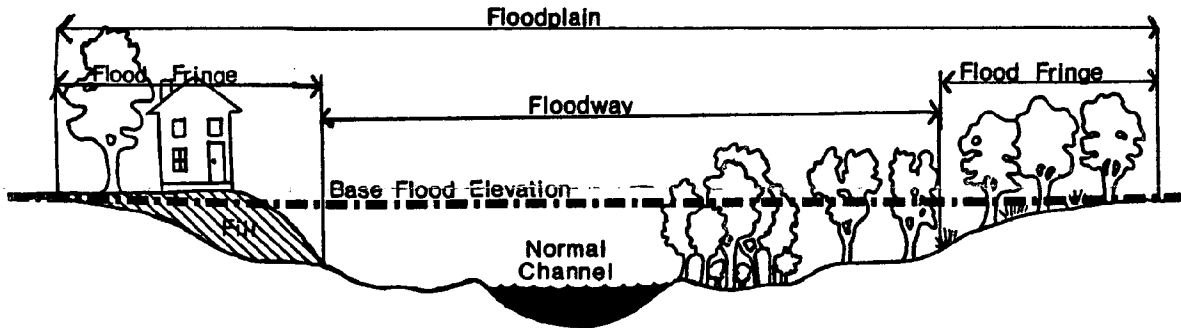
### Floods' indirect costs are hidden as:

- business interruptions and their loss of wages, sales and production
- construction, operation and maintenance of flood control works
- costs of loans for reconstructing damaged facilities
- tax base declines in flood blight areas
- subsidies for flood insurance
- loss of natural floodplain values

# What is a floodplain ?

A floodplain is a lowland or relatively flat area next to a river or stream.

The river uses the floodplain to temporarily store and convey excess water during spring thaw or following heavy rains.



We have had floods as long as there have been rivers. But not until we developed our floodplains did floods damage property and endanger lives.

When we construct buildings in the floodplain we reduce the floodplain's storage capacity causing the next flood of equal intensity to crest higher than the last.

It's just like throwing pebbles in the bathtub.

A little pebble acting alone is insignificant—The combination of many little pebbles will over top the tub and cause major damage — *it's only a matter of time.*

... too much fill causes the river to flood higher.

never flooded before

100-year flood after fill

100-year flood before fill

10-year flood after fill

10-year flood before fill

landfill

bank full

channel

flood levels increased by landfilling

Displacement volume, which raises flood levels across, and upstream.

Floods are measured by their percent chance of happening. The standard of comparison is the 100-year flood. This flood has a 1% chance of happening in any given year. This 100-year flood has a 26% chance of occurring during a 30-year mortgage period. During a similar-30 year period, there is a 17% chance of a house being damaged by fire.

Floods are natural occurrences. It's not a matter of "will it flood?" but "when will it flood?"

Flood insurance allows a flood victim to spread his losses over several years.

- Home owners insurance does not cover floods; flood insurance is only made available through the National Flood Insurance Program.
- Realtors and lenders are required to notify buyers of potential flood hazards on a property at least 10 days before the closing.
- For people to be eligible to buy flood insurance, their community must have a floodplain management program in effect. This program must meet minimum federal standards. Residents of 63 Wisconsin counties and 420 cities and villages are eligible to buy flood insurance.
- While flood insurance is available to all property owners in qualifying communities, some people are required to carry it. This includes anyone buying flood prone property with a federally guaranteed (VA, FHA, SBA) loan or anyone obtaining financing from a federally insured bank or credit union.

## Wisconsin's Floodplain Management Program

Wisconsin counties, cities and villages are required to zone their flood prone areas.

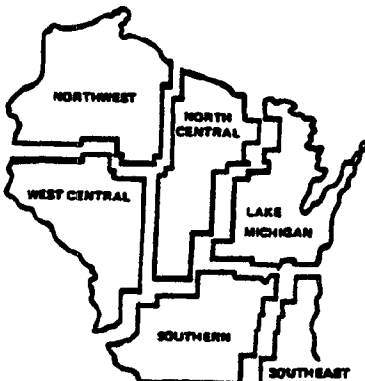
The state has set minimum standards for local regulations, but local governments can set more restrictive standards if they desire.

Floodplain zoning does not prohibit development within the floodplain but guides that development. The program's main goal is to protect people and their property from unwise floodplain development.

You can learn more about floods and floodplain management by calling or visiting your Area or District DNR office. The Federal Emergency Management Agency's Insurance Servicing Agent will answer flood insurance related questions. Call them toll-free at 800-638-6620.

### DNR District and Area Offices:

<b>Northwest/Spooner</b> (715)635-2101 Area Offices: Spooner (715)635-2101 Cumberland (715)822-3590 Park Falls (715)762-4414 Brule (715)372-4866	<b>North Central/Rhineland</b> (715)362-7616 Area Offices: Rhineland (715)362-7616 Wisc. Rapids (715)423-5670 Antigo (715)827-4317 Woodruff (715)356-5211
<b>West Central/Eau Claire</b> (715)836-2928 Area Offices: Eau Claire (715)836-2047 La Crosse (608)785-9000	<b>Lake Michigan/Green Bay</b> (414)497-4040 Area Offices: Green Bay (414)497-4369 Oshkosh (414)424-4003 Marinette (715)732-0101
<b>Southern/Madison</b> (608)266-2628 (608)266-8859 Area Offices: Nevin (608)267-7718 Dodgeville (608)935-3368	<b>Southeast/Milwaukee</b> (414)257-6543 (414)257-6950



*Water*  
regulation  
& zoning

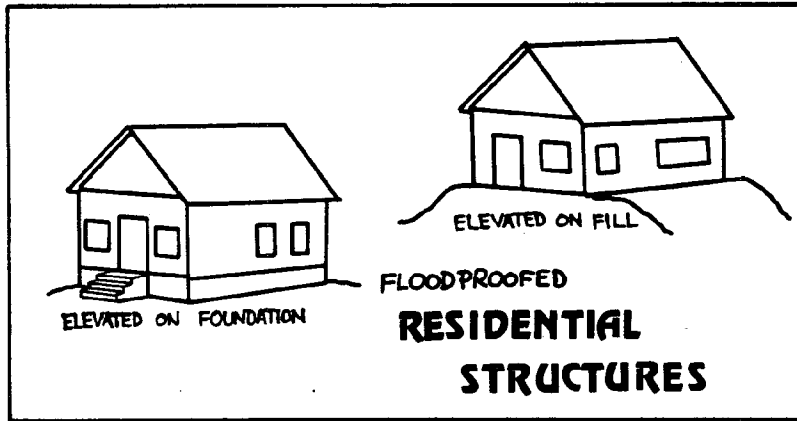
# What can we do about floods ?

Since 1936 the U.S. Army Corps of Engineers has been authorized to construct dams and levees for flood control purposes. But controlling floods with such structures is not always the only or best solution to flood problems.

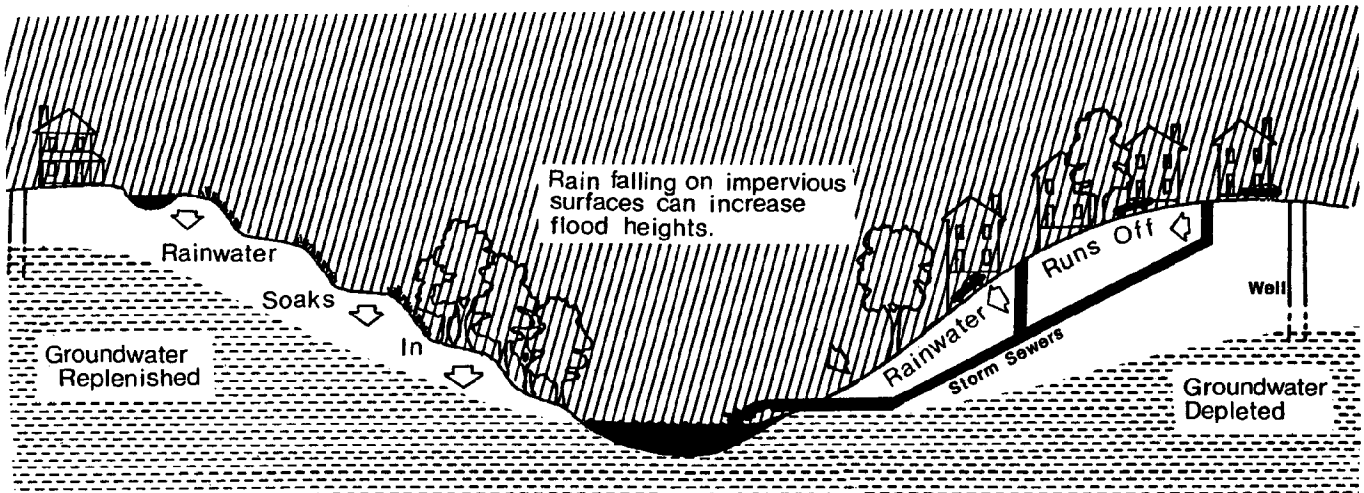
Land use regulations can control development in flood hazard areas. Development within floodplains can be limited to flood resistant structures. In undeveloped floodplains, "open space" uses can be encouraged. The resulting scenic parks, recreational areas, and wildlife refuges provide community amenities.

Flood warning systems and evacuation plans can allow people to protect ~~their property and move to higher ground to prevent injuries.~~

Buildings in floodplains can be elevated on the spot or relocated on higher ground. Other floodproofing techniques are available but expensive. Bridges, roads and culverts can be designed to accommodate expected flood flows.



Land treatments in upland areas can attack the flood problem where it begins. Good soil and water conservation practices minimize runoff. Retention basins moderate run off to offset the higher degree of impervious surfaces that development brings.



## What does the OHWM mean to you as a waterfront property owner?

*Riparian* is the often-used legal term for waterfront property owner.

As a riparian, the land above the OHWM is your private domain. To protect the public waters, you may need to get a permit for any structure to be placed near the shoreline. Check with your district water management coordinator (see map) before beginning any work.

When the water level is below the OHWM you have the exclusive right to use the exposed bed of the waterway in front of your property until the water returns. The public may swim, boat or walk in the water along the shore. You may prevent people from walking on the exposed bed of the waterway by nonstructural means (i.e., permanent fences or walls are not allowed).

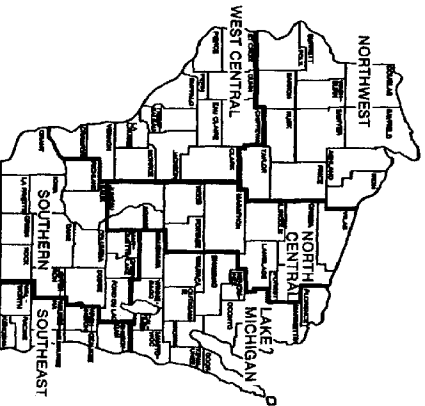
Natural processes, such as erosion or deposition, can affect the location of the OHWM.

Sometimes, shoreline land area is increased by the natural deposit of materials on the shore or bank. You gain title to all naturally deposited new dry land. You do not gain title to new land areas deposited as a result of your own actions such as filling in the water.

Erosion is a slow wearing away of shore or bank material. You are responsible for protecting your property from erosion. You lose title to land that is lost to erosion. A permit program has been set up to ensure proper erosion control practices. Contact your district water management coordinator (see map) before beginning any shoreline erosion control project.

## Do you need to know more about the OHWM?

If you have questions on your water rights or need to find the OHWM on your property contact your district water management coordinator as listed below.



### DNR DISTRICT OFFICES

**NORTHWEST** Box 309  
 Spencer, WI 54801-0309  
 (715) 833-2101

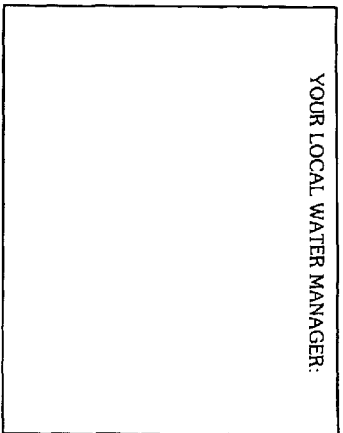
**LAKE MICHIGAN** Box 3600  
 Green Bay, WI 54303-1208  
 (414) 497-4030

**WEST CENTRAL** Call Box 4001  
 Eau Claire, WI 54702-4001  
 (715) 836-2821

**SOUTHERN** 3971 Fish Hatchery Road  
 Madison, WI 53711-5397  
 (608) 266-2628

**SOUTHEAST** Box 13248  
 Rhinelander, WI 548501-0818  
 (715) 362-7616

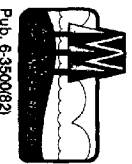
YOUR LOCAL WATER MANAGER:



**PUBLIC  
 OR  
 PRIVATE?  
 II**



**The Ordinary  
 High Water  
 Mark**



Pub. 6-3500(82)

**Waters**  
 regulation  
 & zoning  
 1900-32

## What is the ordinary high-water mark?

The OHWM forms several important boundaries. The dividing line between public and private ownership of land on natural lakes is determined by the OHWM. The citizens of Wisconsin own the beds of natural lakes, which are held in trust for them by the State. The riparian (waterfront) landowner owns the land above the OHWM. On streams, the riparian landowner owns the bed to the center of the stream, but the public has the right to use the water for activities such as canoeing and fishing.

In streams and lakes, the OHWM forms the boundary of the area which is held in trust for all citizens and which the state must protect for them. The Department of Natural Resources (DNR) and the U.S. Army Corps of Engineers have the authority to require permits or plan approvals for activities in public waterways below the OHWM and in some instances above the OHWM where the activity might affect the waterway.

The ordinary high-water mark (OHWM) is the point on the bank or shore where the water is present often enough so that the lake or stream bed begins to look different from the upland. Specifically, the OHWM is the point on the bank or shore up to which the water, by its presence, wave action or flow, leaves a distinct mark on the shore or bank. The mark may be indicated by erosion, destruction of or change in vegetation or other easily recognizable characteristics.

## How is the OHWM found?

Typically, you might need to know the location of the OHWM if you are a landowner planning to build near or change your shoreline. You may request a determination of the OHWM on your property by contacting your district water management coordinator (see map).

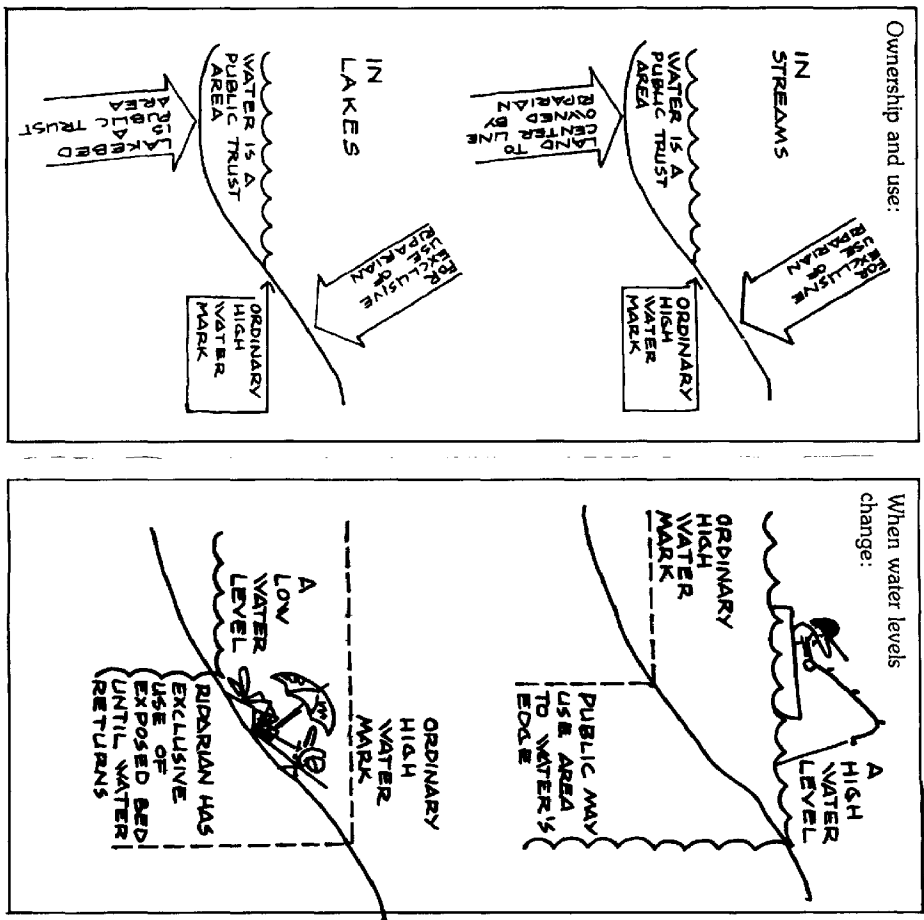
Wisconsin DNR field staff locate the OHWM through on-site studies of physical and biological conditions at the shoreline. The principal indicator is the change from water plants to land plants. In the area where the plants change, the investigator may also use indicators such as change in soil type, ridges or other erosion marks or water stains on rocks, soil, trees or structures. If none of these indicators are available in the immediate location, the elevation of the OHWM may be found at another spot and transferred to the site in question.

## What does the OHWM mean to you as a citizen?

As long as you keep your feet wet, you may walk along the shore, swim or boat in any navigable lake or stream. You need not worry about the location of the OHWM as long as you stay in the water.

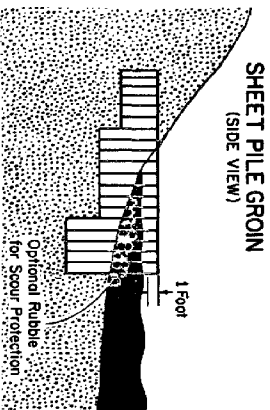
Waterfront property owners can prevent you from walking on the exposed bed of the waterway when the water is below the OHWM. The sketches show your rights in relation to the OHWM.

## Your rights in relation to the OHWM



## WHAT ARE GROINS?

Groins are walls extending at right angles from the beach into the lake. They reduce the force of currents parallel to the shore and they retain sediments. They may be made of timber, concrete, steel, or other material. Groins, if not properly designed, may force currents to drop an overload of sediment and starve beaches down the shore.



## HOW TO REDUCE SLUMPING

- Reshape the bluff face to a stable slope angle.
- Channel excessive surface water runoff through drains, rain spouts, and diversion troughs.
- Control groundwater seeps with drains and collecting pipes.
- Revegetate the bluff face.



## HOW DOES VEGETATION HELP?

The roots of plants are like fingers holding soil. In some cases, plants can be your best ally in combating shore erosion. Vegetation helps reduce the sand and soil loss from effects of wind, rain, ice, and waves. However, high-water levels combined with wave action often destroy vegetation by carrying away the material in which it was rooted.

Surface runoff and human activity also may destroy beach vegetation. Shoreline property owners should know that vegetation may not remain during wave attack to the bluff. The life span of planted or natural vegetation may be as short as the period between major storms, and revegetation may be necessary periodically. Plant selection is very important. Consult your local nursery.

## WHAT TO AVOID

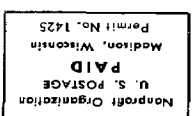
Some lakeshore owners think the way to protect their land is by cluttering it with junked cars and old tires. This won't hold back the lake. In fact, randomly sized and placed objects can adversely affect the shoreline and the view. Remember, you originally came to the coast for the view. **There is no sense in turning a smashing surf into a trashing surf. Don't dump debris on your shoreline. See a coastal engineer for professional advice on shore protection.**

## FOR MORE INFORMATION.....

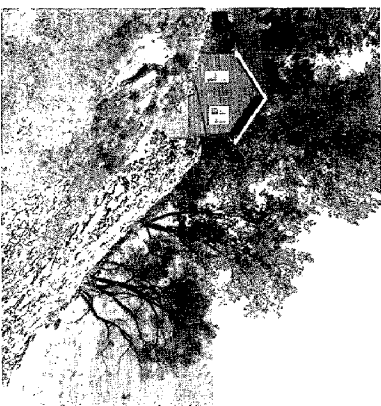
Contact Ellen Fisher, UWEX Coastal Management Specialist (608/262-2106) at 1815 University Avenue, Madison, WI 53706 or your DNR District and County Extension Offices. Consult your directory for local listings.

**UWEX**

UNIVERSITY OF WISCONSIN-EXTENSION  
ENVIRONMENTAL RESOURCES UNIT  
1815 UNIVERSITY AVENUE  
MADISON, WISCONSIN 53706  
(608/262-2106)



## Current Issues



## EROSION

You dream of owning a home perched high on a bluff with a commanding view of crashing Great Lakes surf. You hear the roar of the waves and view the endless expanse of easy blue.

But at the water's edge, something sits. A coastal pirate lies in the lurch to slice your high bluff home from beneath you. He rides in on strong winds and waves, licks the bluff face, and grabs a bite. The coastal pirate—erosion. Your dream could turn into a nightmare.

Erosion has taken place for millions of years. Your actions can hasten or slow erosion, but a complete halt is impossible. Trying to stop erosion is like trying to stand on the tracks and hold back a slowly rolling freight train.



## WHAT IS EROSION?

A dynamic, sometimes stormy marriage of wind, wave, and land sculpts Wisconsin's coast. Erosion is the offspring. Bluffs slump their way to the water and beaches shrink. This is especially true during and following periods of high water and storms when waves and ice attack vulnerable, steep banks.

Lake levels are determined by the amount of rain and snow received each year. Contrary to popular myth, the dams that people have built have little effect on Great Lakes levels.

## HOW DOES EROSION AFFECT ME—EVEN IF I DON'T OWN SHORELINE PROPERTY?

You don't have to own shore property to feel the lick of the lake. Boaters, bathers, anglers, and other lakeshore users feel the pinch from:

- the high cost of park maintenance
- physical hazards from unstable ground
- limits for marina and boat-launching sites
- turbidity and reduced water quality

Erosion clearly affects more than just lakefront homeowners. It affects all users of the coast whether you be a boater, developer, or tourist.



## WILL EROSION EVER STOP?

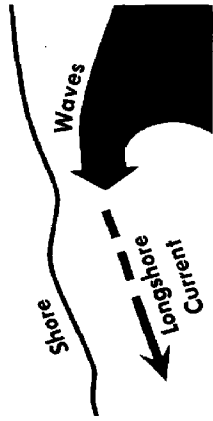
For millions of years, erosion has carved the face of the world. Your actions can affect the rate of erosion, but don't expect to curb the appetite of hungry waves. Around the Great Lakes, for example, you could line football fields end to end along the coast to illustrate the land taken by erosion over the past 100 years.

The lake has a mind of its own and will continue to fight you for the land. The contest is endless and expensive. Property losses in Wisconsin between 1972 and 1976 have been estimated at more than \$16 million. Homes built 150 feet from a bluff's edge may topple into the lake in 10 to 15 years.

## CAN YOU STOP EROSION?

No, but sometimes you can slow it. Erosion is a natural process that people will never totally control. There are three things in life you can count on: death, taxes, and erosion.

Along with waves, wind, and lake levels, an important factor affecting rates of erosion is the longshore current. It runs parallel to the shoreline and carries large amounts of sand along the shore. The current is caused by waves striking the coast at an angle.



Man-made structures affect the shore profile by interrupting the drift of materials along the shore. At times—and if well planned—these structures can work in your favor. At times not. If sand is trapped and beaches built in one area, sand is lost in another. Shoreline owners in one area may be building beaches, but owners further down-drift may be losing their beaches as a result. These structures also can create turbulence that wash away natural sandbars that protect the shore.

## WHAT CAN BE DONE?

People have tried everything from concrete walls to floating tires to armor their precious shore. There is no quick fix or simple answer to shore erosion.

Shorelines vary. Factors like littoral drift, bluff height, soil type, and the shape of the lake bottom determine what protection is best for each area. Choices depend on the value of the land, its uses, and what is technically possible and aesthetically preferable.

Construction costs vary from \$50 per foot for emergency erosion Band-Aids to \$300-\$500 a linear foot for long-term structures. Costs depend on location, soil composition, construction material, and character of erosive forces.

Cooperation with neighbors can save money and make structures more effective. Don't hesitate to organize with your land-based neighbors to counter the coastal pirate. The lake is a neighbor that respects no property boundary and one that is organized to slowly buck you from the shore.

**Before investing in costly shoreline protection, consider other alternatives.** If you already have a building close to the shore, maybe you should move the building. If you are planning new construction, set buildings back far enough to assure protection. And don't take a seat-of-the-pants approach to "how far is safe." Your county planning or zoning office or DNR district or area office will advise you on required permits and will be happy to help you plan a reasonable setback distance.

For structures built below the ordinary high-water mark, you are required to get a permit from the Wisconsin Department of Natural Resources, the Army Corps of Engineers, and sometimes from your local unit of government. The ordinary high-water mark is the usual level the water reaches. It can be identified by distinct marks of erosion or changes in plant life.

There are other tactics to stall erosion. These include seawalls, revetments, groins, bluff stabilization, and vegetation.

## WHAT IS A SEAWALL?

A seawall is a near-vertical wall that does what it says: it's a wall that holds back sliding soil banks while fending off the sea. Seawalls can be effective, but often they scour the lake bottom in front of the wall, causing it to fail under pressure of the soil bank behind it.

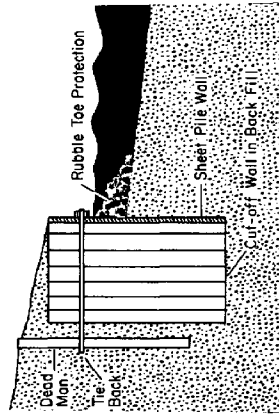
Rocks placed on the lakeward side of the seawall (toe protection) should be used to prevent this scour. Most seawalls, however, are incorrectly built without adequate toe protection.

Seawalls also may fail because they've been constructed without "tie backs." Tie backs are steel or wooden braces running from the seawall to piling in the bluff or bank. Without tie backs, the seawall may push forward into the water due to back pressure from bluffs and water washing over the wall.

Water flowing behind seawalls often carries material away, creating major erosion problems. "Cutoff" and "return" walls would inhibit this process.

Another problem is insufficient construction material. Wooden timbers, steel sheet piling, and other items must be of adequate length and strength. Seawall material must be driven several feet into the beach or lake bottom to resist the pounding force of Great Lakes waves.

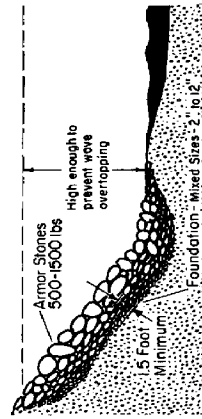
## SEA WALL (CROSS SECTION)



## WHAT IS A REVETMENT?

Revetments are blankets of rock, concrete (trip-rap), or sand-filled bags placed on the bottom of the bluff to prevent wave erosion. To slow erosion, revetments need adequate toe protection and drainage and must be built high enough so that most storm waves will not overtop them. Revetments are highly effective if properly constructed, although they will require maintenance to restore rock and to replace materials scattered about during storms.

## REVETMENT



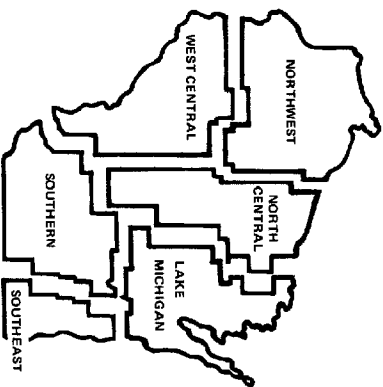
### Steps you can take

- If you are thinking about any of the listed activities, the following four items should be a part of your project planning:
  1. Contact your DNR district water management coordinator (see map). Describe your proposed activity. If a permit or plan approval is needed, the necessary application materials will be mailed to you.
  2. Your permit application will *generally* require the following:
    - description of activity including location and design
    - purpose of activity
    - plans showing location and design of the project
    - for certain projects, proof of ability to carry out the project.
  3. After receiving your application, the department may hold a public hearing or give notice that it will grant you a permit, without a hearing unless one is requested. You may be required to publish the notice or otherwise notify affected people in the project area.
  4. If your project is approved, you will receive a formal permit or project approval. If you have received the necessary federal and local permits, you may start your project subject to the conditions of your permit or approval.
- If you are concerned about the possible effects of any water-related activity, contact your district water management coordinator.

### Regulated activities

The activities which can have a significant impact on the waters and for which permit programs have been established are:

- dredging
- pier construction
- bridge and culvert construction
- placement of sand, rip-rap or fish cills
- connection of any waterway to navigable waters
- grading and pond construction adjacent to waterways
- establishment of bulkhead and pierhead lines
- dam construction, operation and maintenance
- diversion of surface waters or irrigation
- channel changes
- placement of structures, including pipelines, on the bed of navigable waters
- maintenance of level and flow of waters



### Information and assistance

#### DNR District Offices

- |   |   |
|---|---|
| <b>Northwest</b><br>Box 309<br>Spooner, WI 54801<br>(715) 635-2101                        | <b>Southern</b><br>3971 Fish Hatchery Road<br>Madison, WI 53711<br>(608) 266-2628 |
| <b>West Central</b><br>1300 W. Clairmont Avenue<br>Eau Claire, WI 54701<br>(715) 856-2821 | <b>North Central</b><br>Box 818<br>Rhinelander, WI 54501<br>(715) 962-7616        |
| <b>Lake Michigan</b><br>Box 3600<br>Green Bay, WI 54303<br>(414) 497-4040                 | <b>Southeast</b><br>Box 13248<br>Milwaukee, WI 53213<br>(414) 497-4040            |

- U.S. Army Corps of Engineers  
 St. Paul District Corps of Engineers  
 1136 U.S. Post Office & Customhouse  
 St. Paul, MN 55101  
 (612) 725-5819
  - U.S. Coast Guard  
 Commander (obv)  
 2nd Coast Guard District  
 1430 Olive Street  
 St. Louis, MO 63103  
 (314) 425-4807
- Your local water manager:



3700-82 Pub. 4-3500(82)

# do you?

Boat

Farm

Own shore property

Use Wisconsin's lakes & streams

Wisconsin's  
 Water Regulation  
 Programs work  
 for  
**you**



### How water regulations work . . .

If you enjoy fishing or boating on Wisconsin's lakes and streams, water regulations work for you. Maintaining water levels and flows and keeping streams free of obstructions help provide top quality water recreation.

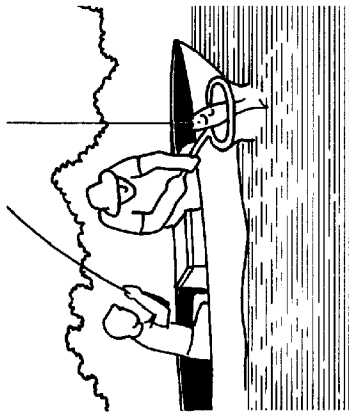
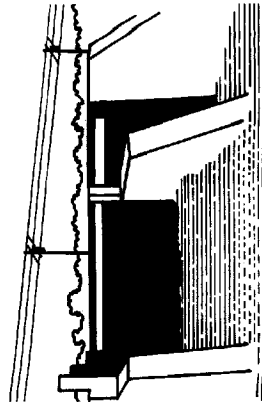
If you farm, you might use Wisconsin's waterways for irrigation or drainage. Water regulations help make your water supply and drainage capacity more reliable while protecting the water rights of others.

If you own waterfront property, water regulations work for you. Regulating erosion control projects and dam or pier construction are a few of the programs which help people avoid dangers and unnecessary costs to themselves or other water users.

### . . . and why

Water regulations are needed because:

- Conflicts often arise between the many different users of waters.
- Water regulations are an alternative to going to court whenever we affect or are affected by our neighbors' water-related activities.



- Clear lakes and free-flowing streams are necessary for healthy fish, wildlife and human populations.

The job of water regulation programs is to accommodate the many different users of Wisconsin's waters in a way that protects our waterways from the overall effect of many individual uses. Translated, water regulation means protection of your water rights.

### Changing protection for changing water needs

When most Wisconsinites' nearest neighbors were wolves and deer, small dams or bridges on streams had little effect on other water users.

As lumbering, milling and farming drew settlers to Wisconsin, the variety of water uses and the number of users grew.

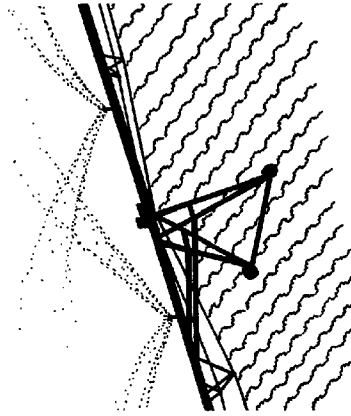
By the turn of the century, recreational hunting, fishing, boating and swimming increased the variety of water needs.

Since 1787, when the Northwest

Ordinance was adopted to govern Wisconsin Territory, the State's navigable waterways have been considered public — for the use of all citizens. Over the years, the courts and the state legislature have developed laws and rules for protecting the rights of waterfront property owners as well as the public. First the Railroad Commission, then the Public Service Commission, and finally the Department of Natural Resources have been charged with carrying out these laws.

Today, the state helps protect your water rights as well as public safety by ensuring adequate planning and design of projects affecting public waters. This is done through permit and plan approval requirements for individual water projects.

Wisconsin laws, Chapter 30, "Navigable Waters, Harbors and Navigation," and Chapter 31, "Regulation of Dams and Bridges in Navigable Waters," establish the permit programs.



### Sharing responsibility for water protection

The DNR has a water management coordinator in each of six districts and water management specialists in area offices whose job is to help people understand their water rights and to administer and enforce the laws which protect them. The water regulation section in Madison provides program coordination and technical support for the field staff.

The U.S. Army Corps of Engineers may require permits for dams, dikes and other structures in federal navigable waters and for the discharge of dredged material into waters and wetlands. The U.S. Coast Guard regulates the construction of bridges and causeways over federal navigable waters.

Local governments use floodplain and shoreland zoning to control development along lake shores and streams. Local zoning officials administer permit programs for development.

We are all responsible for water rights protection. You can protect water rights by following proper procedures for activities in public waters, by reporting activities which may be in violation of laws so that damages can be avoided or corrected and by voicing your opinions to state and local governments to help keep water rights protection up to date.

## What does the OHWM mean to you as a waterfront property owner?

Riparian is the often-used legal term for waterfront property owner.

As a riparian, the land above the OHWM is your private domain. To protect the public waters, you may need to get a permit for any structure to be placed near the shoreline. Check with your district water management coordinator (see map) before beginning any work.

When the water level is below the OHWM, you have the exclusive right to use the exposed bed of the waterway in front of your property until the water returns. The public may swim, boat or walk in the water along the shore. You may prevent people from walking on the exposed bed of the waterway by nonstructural means (i.e., permanent fences or walls are not allowed).

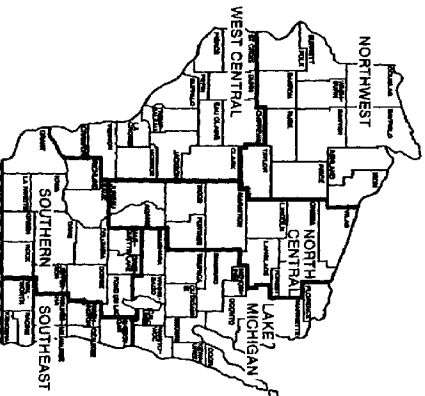
Natural processes, such as erosion or deposition, can affect the location of the OHWM.

Sometimes, shoreline land area is increased by the natural deposit of materials on the shore or bank. You gain title to all naturally deposited new dry land. You do not gain title to new land areas deposited as a result of your own actions such as filling in the water.

Erosion is a slow wearing away of shore or bank material. You are responsible for protecting your property from erosion. You lose title to land that is lost to erosion. A permit program has been set up to ensure proper erosion control practices. Contact your district water management coordinator (see map) before beginning any shoreline erosion control project.

## Do you need to know more about the OHWM?

If you have questions on your water rights or need to find the OHWM on your property contact your district water management coordinator as listed below.

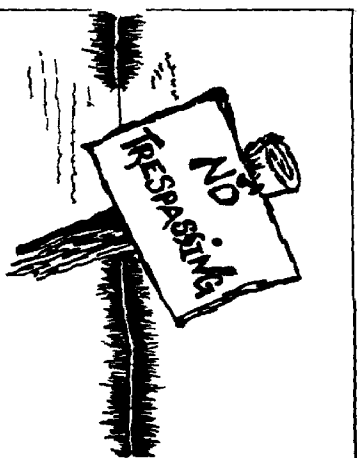
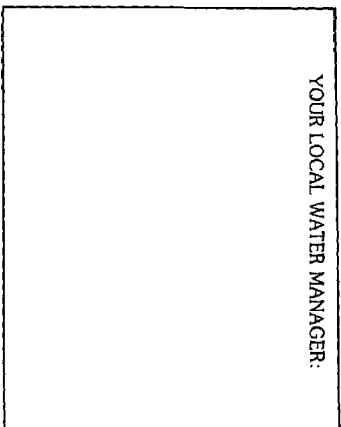


### DNR DISTRICT OFFICES

- |   |  |
|---|--|
| <b>NORTHWEST</b><br>Box 309<br>Spooner, WI 54801-0309<br>(715) 635-2101             | <b>LAKE MICHIGAN</b><br>Box 3600<br>Green Bay, WI 54303-1208<br>(414) 497-4030         |
| <b>WEST CENTRAL</b><br>Call Box 4001<br>Eau Claire, WI 54702-4001<br>(715) 836-2821 | <b>SOUTHERN</b><br>3911 Fish Hatchery Road<br>Madison, WI 53711-5397<br>(608) 266-2628 |
| <b>NORTH CENTRAL</b><br>Box 818<br>Rhinelander, WI 54501-0818<br>(715) 562-7616     | <b>SOUTHEAST</b><br>Box 13248<br>Milwaukee, WI 53213-0248<br>(414) 257-6543            |

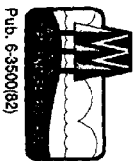
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YOUR LOCAL WATER MANAGER:



**PUBLIC  
OR  
PRIVATE?  
II**

**The Ordinary  
High Water  
Mark**



Pub. 5-3500(82)

**Water  
regulation  
& zoning**

1990/82

## What is the ordinary high-water mark?

The OHWM forms several important boundaries. The dividing line between public and private ownership of land on natural lakes is determined by the OHWM. The citizens of Wisconsin own the beds of natural lakes, which are held in trust for them by the State. The riparian (waterfront) landowner owns the land above the OHWM. On streams, the riparian landowner owns the bed to the center of the stream, but the public has the right to use the water for activities such as canoeing and fishing.

In streams and lakes, the OHWM forms the boundary of the area which is held in trust for all citizens and which the state must protect for them. The Department of Natural Resources (DNR) and the U.S. Army Corps of Engineers have the authority to require permits or plan approvals for activities in public waterways below the OHWM and in some instances above the OHWM where the activity might affect the waterway.

The ordinary high-water mark (OHWM) is the point on the bank or shore where the water is present often enough so that the lake or stream bed begins to look different from the upland. Specifically, the OHWM is the point on the bank or shore up to which the water, by its presence, wave action or flow, leaves a distinct mark on the shore or bank. The mark may be indicated by erosion, destruction of or change in vegetation or other easily recognizable characteristics.

## How is the OHWM found?

Typically, you might need to know the location of the OHWM if you are a landowner planning to build near or change your shoreline. You may request a determination of the OHWM on your property by contacting your district water management coordinator (see map).

Wisconsin DNR field staff locate the OHWM through on-site studies of physical and biological conditions at the shoreline. The principal indicator is the change from water plants to land plants. In the area where the plants change, the investigator may also use indicators such as change in soil type, ridges or other erosion marks or water stains on rocks, soil, trees or structures. If none of these indicators are available in the immediate location, the elevation of the OHWM may be found at another spot and transferred to the site in question.

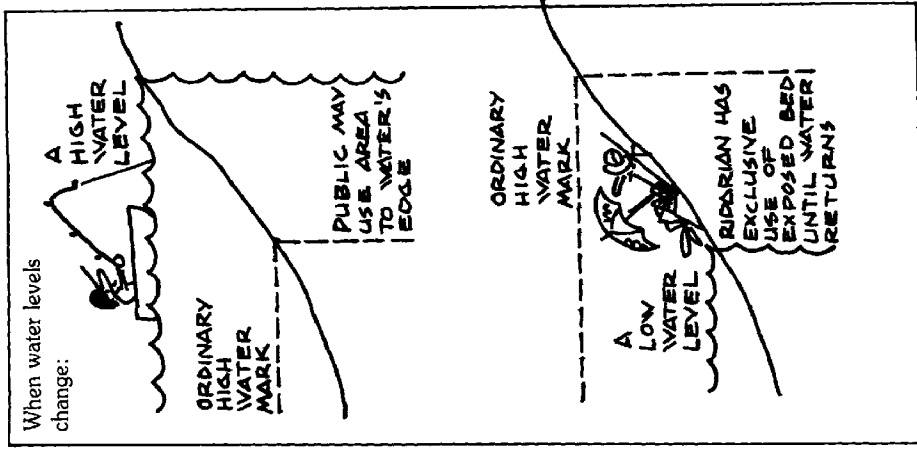
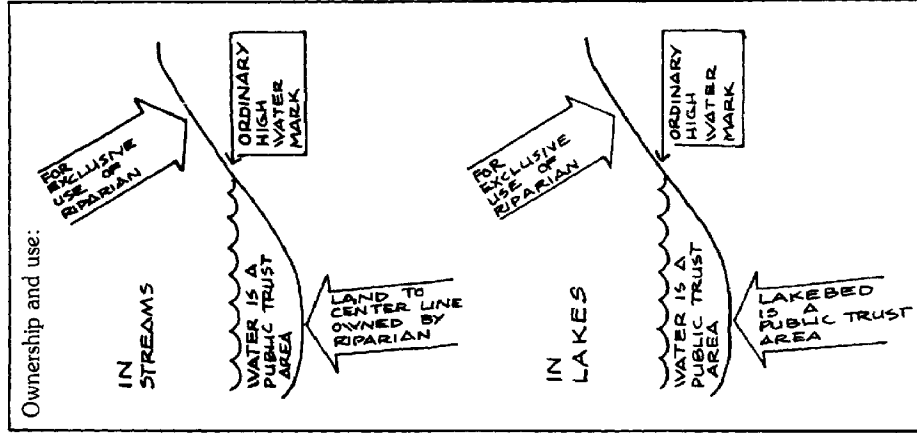
## What does the OHWM mean to you as a citizen?

As long as you keep your feet wet, you may walk along the shore, swim or boat in any navigable lake or stream. You need not worry about the location of the OHWM as long as you stay in the water.

Waterfront property owners can prevent you from walking on the exposed bed of the waterway when the water is below the OHWM.

The sketches show your rights in relation to the OHWM.

## Your rights in relation to the OHWM



*Note -*

**TO PROSPECTIVE BUYER**

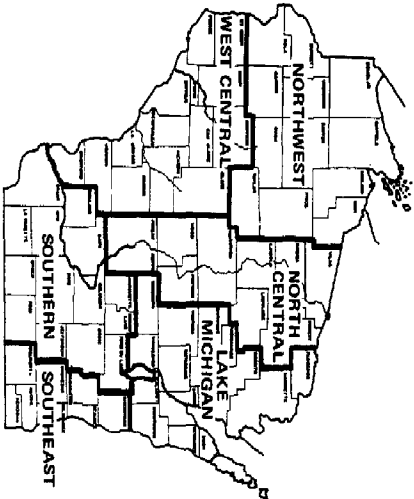
Wisconsin has enacted strict floodplain and shoreland laws for your benefit. The application of these laws through local ordinances will insure a better building site for you. In addition the laws provide maximum protection to Wisconsin's water resources for your enjoyment.

General questions and requests for assistance can be directed to the offices identified in this brochure.

Questions on specific sites should be directed to the local county zoning administrator's office, usually located in the county courthouse.

**FLOOD INSURANCE**

Persons who are considering the purchase of properties in the vicinity of rivers and streams may be required to purchase flood insurance as a condition for receiving financing through federally regulated lending institutions (banks, savings & loans, etc.). Questions on the specifics of the National Flood Insurance Program should be directed to the DNR district office in the vicinity or to the Flood Insurance Coordinator, Department of Natural Resources, Madison, Wisconsin.

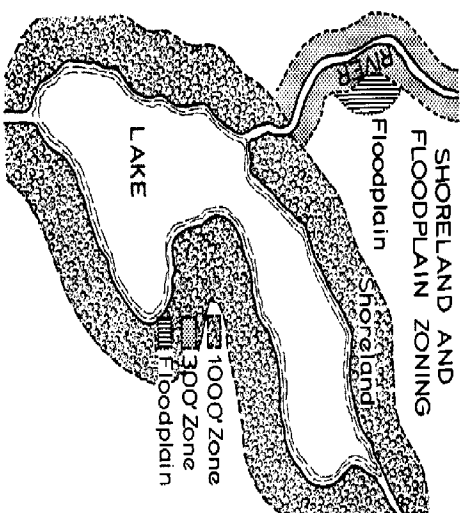


**DNR DISTRICT OFFICES:**

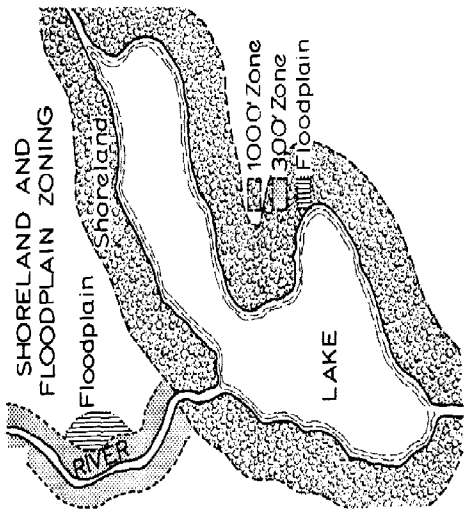
- NORTHWEST DISTRICT:**  
Department of Natural Resources  
Box 309  
Spooner, Wisconsin 54801  
(715) 636-2101
- NORTH CENTRAL DISTRICT:**  
Department of Natural Resources  
Box 818  
Rhinelander, Wisconsin 54501  
(715) 362-7616
- WEST CENTRAL DISTRICT:**  
Department of Natural Resources  
1300 W. Clearmont Avenue  
Call Box 4001  
Eau Claire, Wisconsin 54702  
(715) 836-2821
- LAKE MICHIGAN DISTRICT:**  
Department of Natural Resources  
1125 N. Military Ave., Box 3600  
Green Bay, Wisconsin 54303  
(414) 497-4040
- SOUTHERN DISTRICT:**  
Department of Natural Resources  
3911 Fish Hatchery Road  
Madison, Wisconsin 53711  
(608) 266-2828
- SOUTHEAST DISTRICT:**  
Department of Natural Resources  
9722 W. Watertown Plank Road  
Box 13248  
Milwaukee, Wisconsin 53213  
(414) 257-6543

**STATE OF WISCONSIN**  
**DEPARTMENT OF NATURAL RESOURCES**  
**DIVISION OF ENFORCEMENT**  
P.O. BOX 7921  
MADISON, WISCONSIN 53707-7921

**SUGGESTIONS FOR PROSPECTIVE BUYERS OF WATERFRONT PROPERTY IN RURAL WISCONSIN**



BEFORE YOU BUY \_\_\_\_\_ check all of these



**SHORELAND PROTECTION**

Wisconsin law requires all counties to adopt shoreland regulations that include:

- Zoning
- Subdivision controls
- Sanitary codes

These ordinances will govern:

- Permitted use of shorelands and floodplains and wetlands
- Lot size
- Setbacks of buildings from ordinary high watermarks
- Tree cutting along shorelands
- Location and size of waste disposal systems

**LAND DESCRIPTION**

Clear title to property with good description of land purchased (see your lawyer or realtor).

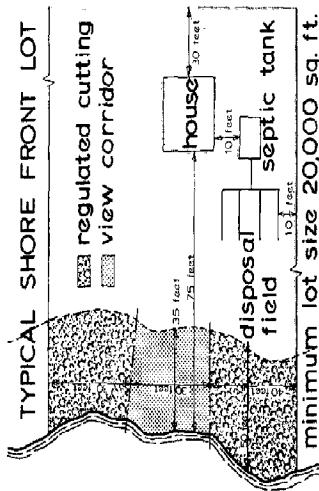
Recorded plat with state approval (see County Register of Deeds).

If not part of recorded plat be sure lot has been surveyed by a *registered* surveyor.

**SANITATION**

Contact the county zoning administrator or sanitarian for the following conditions:

- 1 Site Conditions - soil type and permeability, slope and depth to ground water and bedrock.
- 2 Information on waste disposal systems.



**ZONING**

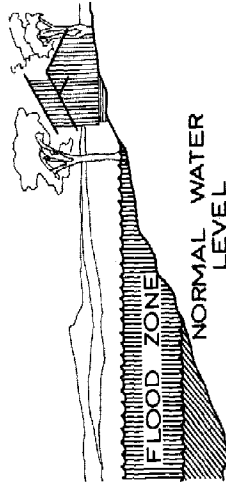
Contact the county zoning administrator concerning the site you are interested in to make certain that:

- The property is zoned for the use you intend.
- Zoning of adjacent properties will not create conflicts with your interests later.
- Special zoning practices such as mobile home or trailer zoning will not cause problems later.

**FLOOD HAZARD**

Areas subject to flooding must be zoned to accomplish:

- Protection of channel and floodway against unnecessary encroachments.
- Elevation of residences constructed in floodplain above the regulatory flood height.



## Finishing Your Riprap

After the riprap has been placed, it will be necessary to revegetate disturbed, unprotected areas. A grass seed mixture with a large proportion of quick germinating annual or perennial grass is recommended. Occasional mowing is required to promote good sod development. Types of vegetative cover other than grasses are available for steep slopes which would be difficult to mow. For guidance on seed mixtures contact your local representative of the U.S. Department of Agriculture Soil Conservation Service

## Before You Begin Work . . .

A permit may be required from your local zoning administrator and/or the Army Corps of Engineers.

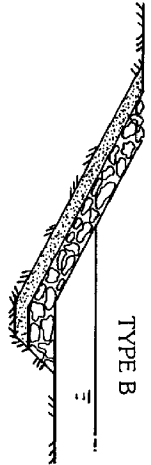
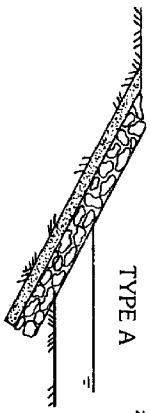
If your project is in an unincorporated area, contact the county zoning office (usually in the courthouse). In a city or village, contact the building inspector or local zoning office.

Contact the Regulatory Functions Branch of the Army Corps of Engineers:

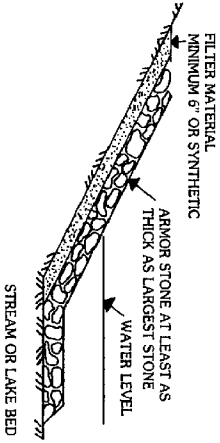
St. Paul District, Army Corps of Engineers  
1135 U.S. Post Office & Custom House  
St. Paul, MN 55101  
(612) 725-7712

## ANCHORING YOUR RIPRAP

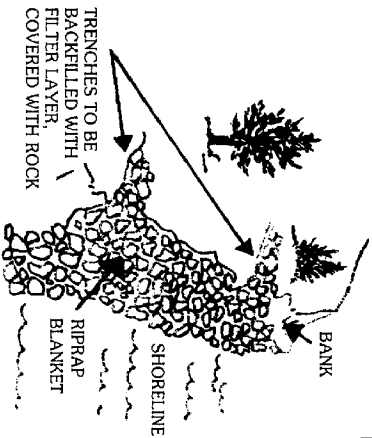
### RECOMMENDED FOR GENERAL USE



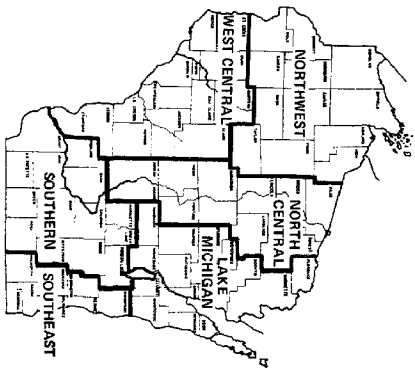
### PROTECTION ON LARGE WATERWAYS



### TO PREVENT FLANK EROSION



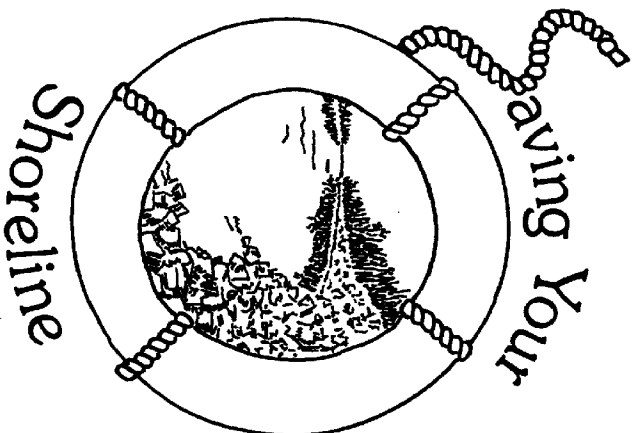
Contact your district or area DNR water management representative for advice and assistance (see map). A State of Wisconsin permit is required for most grading and riprap projects.



### DNR DISTRICT OFFICES

<b>NORTHWEST</b> Box 309 Spooner, WI 54801-0309 (715) 635-2101	<b>LAKE MICHIGAN</b> Box 3600 Green Bay, WI 54303-1208 (715) 362-7616
<b>WEST CENTRAL</b> Call Box 4001 Eau Claire, WI 54702-4001 (715) 836-2821	<b>SOUTHERN</b> 3911 Fish Hatchery Road Madison, WI 53711-5397 (608) 266-2628
<b>NORTH CENTRAL</b> Box 818 Rhinelander, WI 54801-0818 (715) 362-7616	<b>SOUTHEAST</b> Box 13248 Milwaukee, WI 53213-0248 (414) 257-6543

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## General Guidelines for Grading and Riprap

Department of Natural Resources  
Bureau of Water Regulation and Zoning  
Box 7921  
Madison, WI 53707-7921



## Saving Your Shoreline

There are two primary objectives of any successful riprap project: stabilizing the slope and protecting bank material from being lost to erosion.

The stability of the slope depends on four things: 1) the type of material involved; 2) the height of the embankment; 3) the slope of the embankment and 4) the external forces such as ice action and upland structures or vehicles acting on the embankment.

## Is Grading the Answer?

The shoreline can often be stabilized by grading the slope to a flatter angle.

Cohesiveness of the bank material is important in determining grading requirements. The bank materials commonly encountered range from pure cohesive to pure noncohesive soils.

Sand is an example of a noncohesive material. If properly sloped and protected, it will remain stable regardless of the height of the embankment. Noncohesive materials usually need to be graded to at least  $2\frac{1}{2}$  horizontal to 1 vertical (a  $22^\circ$  slope) to remain stable with vegetative covers. Use of stone riprap may allow grading to a steeper angle, up to  $1\frac{1}{2}$  horizontal to 1 vertical.

Clay is an example of a cohesive material consisting of very fine particles barely distinguishable by the human eye. It is often difficult to dry out. Clay and other noncohesive soils may not remain stable when simply graded to a uniform slope and protected by vegetation or riprap. Clay material may require terracing or retaining walls to attain stability.

Sand and clay illustrate the two stability extremes you may expect to encounter. The material you will be working with will usually be a mixture, with stability properties somewhere between sand and clay.

A prime indicator of grading requirements is the immediately surrounding area. If an adjacent embankment is stable at a given slope, chances are that your bank will be stable if graded to a similar slope.

## Choosing Your Protection

Once you have decided on a grading plan (if necessary), you will need to determine the type of protection required to prevent your shoreline from eroding. Rock riprap is a common, generally low cost choice which can yield excellent results.

The idea behind a riprap project is to build an armored filter which traps the bank material and prevents it from being washed away. Ideally the riprap should be layered from a fine material against the bank to an armor layer of large stone that water and ice will not be able to move around. The texture of the existing bank material should influence the gradation of your filter. If your bank material is clay (with a very small particle size), you should start with a layer of a fine sand material followed by a layer of coarser sand and gravel, followed by a layer of stone. Remember, each succeeding layer should be just coarse enough to ensure that the underlayer cannot move through it. If your bank material is a coarse sand, you may be able to use one base course of gravel followed by a layer of riprap. In most cases a base course or filter layer should be used.

Synthetic filter cloths can be used instead of a conventional granular base course. Although it may be more expensive than sand and gravel filter material, ease of placement and superior performance can justify the increased cost.

The armor layer should be well graded but free from fine material. Following are three suggested gradations for riprap designed for light, medium and heavy protection. In each of the gradations, the suggested percentage of stone size to be used for the total project is shown in the right column.

### Size of Stone % of Stone Size to be Used

#### Light Protection

2 lb. (3" diameter) or smaller	10%
2 lb. (3" diameter) - 25 lb. (8" diameter)	40%
25 lb. (8" diameter) - 60 lb. (11" diameter)	30%
60 lb. (11" diameter) - 100 lb. (13" diameter)	20%

#### Medium Protection

20 lb. (0.6' diameter) or smaller	10%
20 lb. (0.6' diameter) - 200 lb. (1.3' diameter)	40%
200 lb. (1.3' diameter) - 500 lb. (1.8' diameter)	30%
500 lb. (1.8' diameter) - 700 lb. (2.0' diameter)	20%

#### Heavy Protection

40 lb. (0.8' diameter) or smaller	10%
40 lb. (0.8' diameter) - 700 lb. (2.0' diameter)	40%
700 lb. (2.0' diameter) - 1400 lb. (2.5' diameter)	30%
1400 lb. (2.5' diameter) - 2000 lb. (3.0' diameter)	20%

The degree of protection needed will depend upon the body of water involved.

To withstand external forces the stone used should generally be hard, durable and angular. There should be no elongated stones where the longest dimension is more than three times the shortest dimension. Round stones tend to roll, and may fail to

adequately protect a shoreline. Since they break down readily, shale, soft sandstones and organic material should be avoided.

## Putting Your Protection in Place

Riprap can be placed either by hand or machine or by simply dumping the stone. Experience has shown that dumping is the most effective method. Dumping seems to do a much better job of integrating the stone and forming a continuous blanket of protection, provided the riprap is not dumped down long embankments. In rolling down embankments, the material separates into pockets of large and small stone, preventing the riprap from protecting the bank to its fullest capacity. Dumped ripraps usually require some additional shaping with heavy equipment.

Riprap should be placed no steeper than  $1\frac{1}{2}$  horizontal to 1 vertical. Flatter slopes will be more stable, but will require more stone.

In order for the riprap to remain stable, care must be taken to ensure stability of the starting and ending points along the shoreline. If the starting and ending points are not stable, failure of the riprap structure can occur through flanking (undercutting) from the ends to the center. Often the area surrounding the proposed riprap site proves to be unstable. In such cases, it is recommended that the ends of the riprap curve landward in order to prevent the structure from being flanked.

In addition to ensuring stability of the ends along the shore, anchoring the riprap to the bed of the waterway should be considered. Three methods of anchoring the riprap into the bed material are shown here.

Riprap must follow existing shoreline contours as nearly as possible. Property lost to gradual erosion may not be reclaimed. Protection should be considered to prevent further erosion.

You may need either a county land use or building permit for the following uses in a shoreland-wetland district:

- 1) construction and maintenance of a road through a wetland
- 2) construction and maintenance of non-residential buildings that have uses compatible with wetland preservation
- 3) development of all parks, recreation areas, boat access sites, outdoor education areas, historic and scientific areas, wildlife refuges, game preserves, and private wildlife habitat areas
- 4) construction and maintenance of railroad lines and public utility transmission and distribution lines
- 5) maintenance of town and county highways and bridges

You may need a state permit under Chapter 30, Wisconsin Statutes, for maintenance and repair of existing drainage systems, or construction and maintenance of some piers, docks, and walkways. A case-by-case assessment of such situations will be necessary. Contact your county zoning administrator or the Department of Natural Resources' district headquarters if you have questions regarding these uses.

## 12. What is the penalty for violating shoreland-wetland zoning ordinance provisions?

Penalties vary from county to county and are established by your county shoreland zoning ordinance. Existing shoreland ordinances may require violators to forfeit not less than \$10.00 nor more than \$200.00 per day of violation. In addition, a violator may have to restore a wetland to its former condition prior to the violator's use.

## 13. Who will enforce shoreland-wetland zoning?

The county zoning administrator will report violations of a shoreland zoning ordinance to the county zoning committee or to the district attorney. The district attorney will then prosecute violators involved.

For further information, contact the Department of Natural Resources' district headquarters nearest you, listed below.

Northwest District Headquarters  
Box 309  
Spooner, WI 54801  
715/655-2101

North Central District Headquarters  
Box 818  
Rhinelander, WI 54501  
715/362-7616

Lake Michigan District Headquarters  
1125 North Military Ave.  
Box 3600  
Green Bay, WI 54303  
414/497-4030

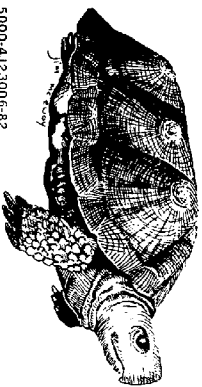
Southeast District Headquarters  
9722 West Watertown Plank Rd.  
Box 13248  
Milwaukee, WI 53213  
414/257-6952

West Central District Headquarters  
1300 West Clairmont Ave.  
Box 4001  
Eau Claire, WI 54701  
715/836-2928

Southern District Headquarters  
3911 Fish Hatchery Rd., Rt. 4  
Madison, WI 53711  
608/266-3859

Text: Sumner W. Matteson  
Graphic Art: Jim McEvoy

2-81

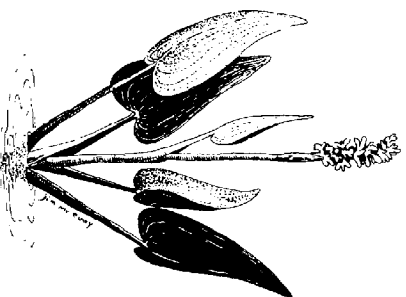


5000-4J2300C-82



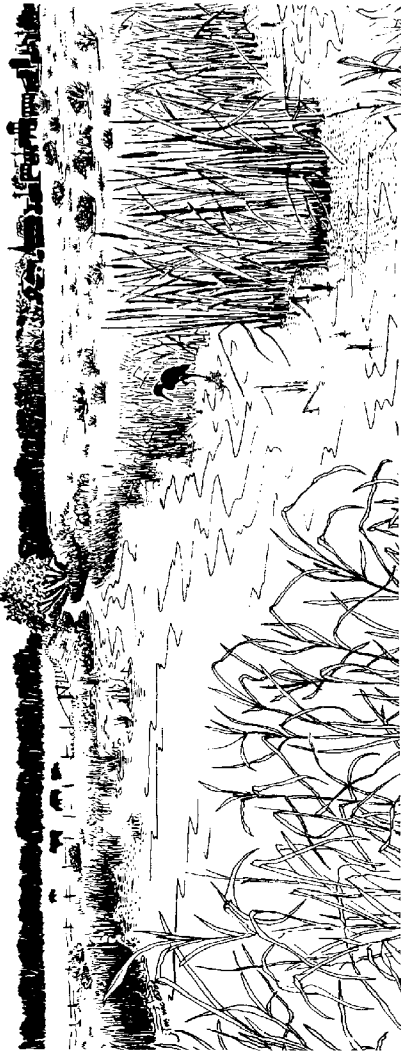
Wisconsin Department of Natural Resources  
Box 7921  
Madison, Wisconsin 53707

# Protecting Wetlands in Shoreland Areas



At one time, Wisconsin had 7.5 to 10 million acres of wetlands. Now, only about 2.5 million acres remain—many of them altered or degraded. Recognizing the need to protect Wisconsin's wetlands, the Natural Resources Board has modified Chapter NR 115 of the Wisconsin Administrative Code to provide more uniform county regulation of wetlands in shoreland areas. Key questions and answers on NR 115 are presented in this brochure.

Wisconsin Dept. of Natural Resources



**6. Can I drain, dredge, fill, or flood undisturbed wetlands in a shoreland-wetland district?**

No. NR 115 will not allow these activities in a shoreland-wetland district, unless you grow cranberries. However, you may still cultivate other crops in a shoreland-wetland district, as long as you don't drain, dredge, fill or flood the wetland.

**7. Why are cranberry growers exempt from regulation under NR 115?**

Section 94.26, Wisconsin Statutes, specifically authorizes construction of dams, drains, and ditches on lands producing cranberries, but does not apply to drainage or flooding of lands that produce other crops. Therefore, Wisconsin law exempts cranberry growers from regulation under NR 115.

**1. Does NR 115 apply to all wetlands in the state?**

No. Only those wetlands in shoreland areas must be regulated under NR 115. By law, shorelands are defined as unincorporated areas located within 1,000 feet of the ordinary high water mark of a navigable lake, pond, or flowage or within 300 feet of the ordinary high water mark of a navigable river or stream (or to the landward edge of the floodplain, whichever distance is greater).

**2. What is the relationship between NR 115 and the DNR's wetlands mapping program?**

The wetlands mapping program, officially known as the Wisconsin Wetlands Inventory, was mandated by the Wisconsin legislature in 1978 to further conservation of wetlands. The program is producing state wetland maps covering each township. These maps will enable a landowner to identify wetlands that might be regulated under NR 115. A county will have six months to adopt shoreland-wetland zoning after it receives final inventory maps.

**3. Will farmers lose existing agricultural land through zoning of wetlands under NR 115?**

No. County shoreland zoning ordinances enacted in compliance with NR 115 will not prohibit contin-

ued cultivation of land that is currently being farmed.

**4. Will NR 115 allow me to continue operating and maintaining my present drainage system?**

Yes. In response to concerns expressed by agricultural groups and the state Board of Agriculture, Trade, and Consumer Protection, NR 115 allows continued operation and maintenance of existing drainage systems. However, under Chapter 30, Wisconsin Statutes, a permit may be required. Contact the county zoning administrator or the Department of Natural Resources' district headquarters in your area if you have any questions regarding such maintenance.

**5. Would I be able to repair and use tile or ditches put in years ago on land that has since reverted to wetland?**

Maybe. A case-by-case assessment of such situations by the county zoning administrator will be necessary to determine the extent of maintenance or replacement involved.

Under NR 115.05 (2) (c) 5, you may maintain and repair existing drainage systems in a shoreland-wetland district; this means the maintenance and repair of a functioning drainage system located on land that is currently cultivated.

**10. What if I want to develop a wetland for uses other than those NR 115 allows?**

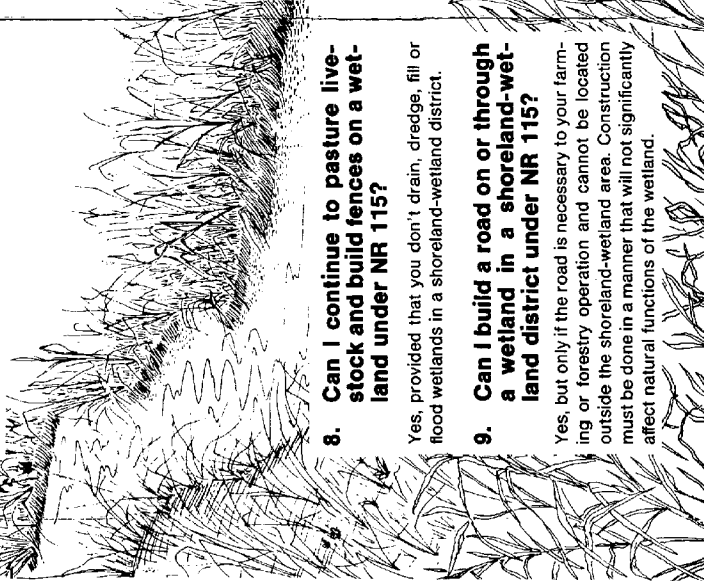
Ask your county zoning administrator for a petition to rezone the wetland in question. Fill out the petition and file it with the county clerk. After the county receives your petition, the following occurs:

- 1) The county zoning agency will announce a public hearing on the petition in your local paper, and will contact you about the exact date, time, and place.
- 2) If the Department of Natural Resources' district headquarters in your area finds that rezoning would result in a significant adverse impact on the wetland, it will notify the county zoning agency of its findings prior to or during the hearing.
- 3) The county zoning agency will present recommendations to the county board, and if the county board and DNR district office approve of the proposed amendment, it will go into effect immediately.

**11. Which uses of a wetland in a shoreland-wetland district do not require a county or state permit? Which uses do require a permit?**

Based on NR 115 and your county shoreland zoning ordinance, you will not need a permit for the following uses in a shoreland-wetland district, provided you don't drain, dredge, fill or flood the wetland:

- 1) hunting, fishing, trapping, hiking, swimming, and boating
- 2) harvesting of wild crops, such as marsh hay, ferns, moss, wild rice, berries, tree fruits, and tree seeds
- 3) planting, thinning, and harvesting timber
- 4) pasturing livestock and constructing and maintaining fences
- 5) constructing and maintaining duck blinds, piers, docks, and walkways
- 6) cultivating agricultural crops



**8. Can I continue to pasture livestock and build fences on a wetland under NR 115?**

Yes, provided that you don't drain, dredge, fill or flood wetlands in a shoreland-wetland district.

**9. Can I build a road on or through a wetland in a shoreland-wetland district under NR 115?**

Yes, but only if the road is necessary to your farming or forestry operation and cannot be located outside the shoreland-wetland area. Construction must be done in a manner that will not significantly affect natural functions of the wetland.

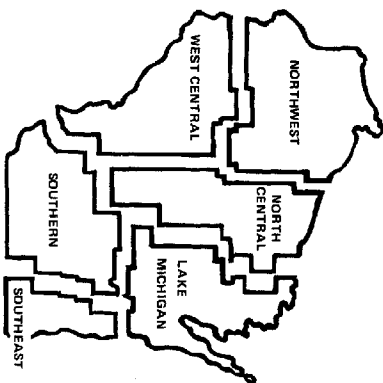
### Steps you can take

- If you are thinking about any of the listed activities, the following four items should be a part of your project planning:
  1. Contact your DNR district water management coordinator (see map). Describe your proposed activity. If a permit or plan approval is needed, the necessary application materials will be mailed to you.
  2. Your permit application will generally require the following:
    - description of activity including location and design
    - purpose of activity
    - plans showing location and design of the project
    - for certain projects, proof of ability to carry out the project.
  3. After receiving your application, the department may hold a public hearing or give notice that it will grant you a permit without a hearing unless one is requested. You may be required to publish the notice or otherwise notify affected people in the project area.
  4. If your project is approved, you will receive a formal permit or project approval. If you have received the necessary federal and local permits, you may start your project subject to the conditions of your permit or approval.
- If you are concerned about the possible effects of any water-related activity, contact your district water management coordinator.

### Regulated activities

The activities which can have a significant impact on the waters and for which permit programs have been established are:

- dredging
- pier construction
- bridge and culvert construction
- placement of sand, rip-rap or fish cribs
- connection of any waterway to navigable waters
- grading and pond construction adjacent to waterways
- establishment of bulkhead and pierhead lines
- dam construction, operation and maintenance
- diversion of surface waters or irrigation
- channel changes
- placement of structures, including pipelines, on the bed of navigable waters
- maintenance of level and flow of waters



### Information and assistance

#### DNR District Offices

- |  |   |
|--|---|
| <b>Northwest</b><br>Box 309<br>Spooner, WI 54801<br>(715) 635-2101                         | <b>Southern</b><br>3971 Fish Hatchery Road<br>Madison, WI 53711<br>(608) 266-2628 |
| <b>West Central</b><br>1300 W. Chairemont Avenue<br>Eau Claire, WI 54701<br>(715) 836-2821 | <b>North Central</b><br>Box 818<br>Rhinelander, WI 54501<br>(715) 362-7616        |
| <b>Lake Michigan</b><br>Box 3600<br>Green Bay, WI 54303<br>(414) 497-4040                  | <b>Southeast</b><br>Box 13248<br>Milwaukee, WI 53213<br>(414) 257-5543            |

- U.S. Army Corps of Engineers  
St. Paul District Corps of Engineers  
1135 U.S. Post Office & Customhouse  
St. Paul, MN 55101  
(612) 725-6819
  - U.S. Coast Guard  
Commander (001)  
2nd Coast Guard District  
1430 Olive Street  
St. Louis, MO 63103  
(314) 425-4607
- Your local water manager:

3700-82 Pub. 4-3500(822)

# do you?

Boat

Farm

Own shore property

Use Wisconsin's lakes & streams

Wisconsin's  
Water Regulation  
Programs work  
for  
**you.**



### How water regulations work . . .

If you enjoy fishing or boating on Wisconsin's lakes and streams, water regulations work for you. Maintaining water levels and flows and keeping streams free of obstructions help provide top quality water recreation.

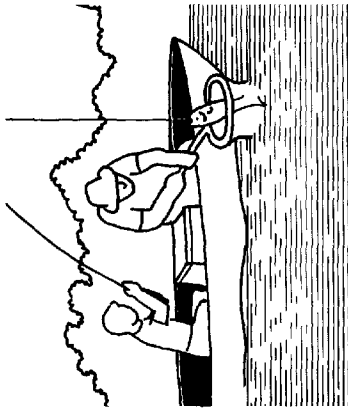
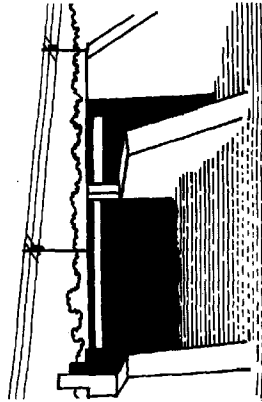
If you farm, you might use Wisconsin's waterways for irrigation or drainage. Water regulations help make your water supply and drainage capacity more reliable while protecting the water rights of others.

If you own waterfront property, water regulations work for you. Regulating erosion control projects and dam or pier construction are a few of the programs which help people avoid dangers and unnecessary costs to themselves or other water users.

### . . . and why

Water regulations are needed because:

- Conflicts often arise between the many different users of waters.
- Water regulations are an alternative to going to court whenever we affect or are affected by our neighbors' water-related activities.



- Clear lakes and free-flowing streams are necessary for healthy fish, wildlife and human populations.

The job of water regulation programs is to accommodate the many different users of Wisconsin's waters in a way that protects our waterways from the overall effect of many individual uses. Translated, water regulation means protection of your water rights.

### Changing protection for changing water needs

When most Wisconsinites' nearest neighbors were wolves and deer, small dams or bridges on streams had little effect on other water users.

As lumbering, milling and farming drew settlers to Wisconsin, the variety of water uses and the number of users grew.

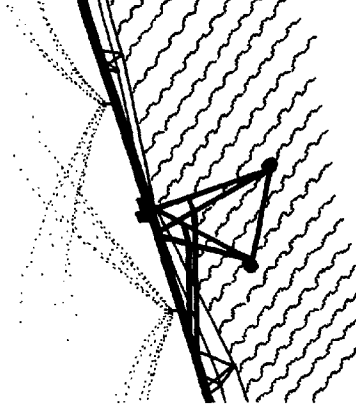
By the turn of the century, recreational hunting, fishing, boating and swimming increased the variety of water needs.

Since 1787, when the Northwest

Ordinance was adopted to govern Wisconsin Territory, the State's navigable waterways have been considered public — for the use of all citizens. Over the years, the courts and the state legislature have developed laws and rules for protecting the rights of waterfront property owners as well as the public. First the Railroad Commission, then the Public Service Commission, and finally the Department of Natural Resources have been charged with carrying out these laws.

Today, the state helps protect your water rights as well as public safety by ensuring adequate planning and design of projects affecting public waters. This is done through permit and plan approval requirements for individual water projects.

Wisconsin laws, Chapter 30, "Navigable Waters, Harbors and Navigation," and Chapter 31, "Regulation of Dams and Bridges in Navigable Waters," establish the permit programs.



### Sharing responsibility for water protection

The DNR has a water management coordinator in each of six districts and water management specialists in area offices whose job is to help people understand their water rights and to administer and enforce the laws which protect them. The water regulation section in Madison provides program coordination and technical support for the field staff.

The U.S. Army Corps of Engineers may require permits for dams, dikes and other structures in federal navigable waters and for the discharge of dredged material into waters and wetlands. The U.S. Coast Guard regulates the construction of bridges and causeways over federal navigable waters.

Local governments use floodplain and shoreline zoning to control development along lake shores and streams. Local zoning officials administer permit programs for development.

We are all responsible for water rights protection. You can protect water rights by following proper procedures for activities in public waters, by reporting activities which may be in violation of laws so that damages can be avoided or corrected and by voicing your opinions to state and local governments to help keep water rights protection up to date.

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