

N.R. 116 Procedure**INTRODUCTION**

The statutory basis of N.R. 116 is found in Wisconsin Statute 87.30 which requires municipalities, counties, cities, and villages to adopt reasonable and effective floodplain zoning ordinances within their jurisdiction, to regulate floodplains where serious flood damage might occur.

The purpose of these rules is to provide a uniform basis for the implementation of floodplain regulations to:

- a. Protect life, health and property;
- b. Minimize public expenditures for costly flood control projects;
- c. Minimize rescue and relief efforts and their cost;
- d. Minimize business interruptions;
- e. Minimize damage to public facilities such as water mains, sewers, streets and bridges;
- f. Minimize the occurrence of future flood blight areas;
- g. Discourage victimization of unwary land and home buyers; and
- h. Prevent regional flood increases which may result in conflict and litigation between landowners.

DEFINITIONS

Channel - a natural or artificial watercourse with definite bed and banks to confine and conduct the normal flow of water.

Coastal floodplain - an area along the coast of Lake Michigan or Lake Superior which is inundated by the regional flood and which is also subject to additional hazards due to wave runoff.

Development - any artificial 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 buildings or structures; mining, dredging, filling, grading, paving, excavation or drilling operations; and the storage, deposition or extraction of materials.

Flood or flooding - a general and temporary condition of partial or complete inundation of normally dry land areas caused by:

- a) The overflow or rise of inland waters;
- b) The rapid accumulation or runoff of surface waters from any source;
- c) The inundation caused by waves or currents of water exceeding anticipated cyclical levels along the shore of Lake Michigan or Lake Superior; and
- d) The sudden increase caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as a seiche, or by some similarly unusual event.

Flood frequency - the probability of a flood occurrence. A flood frequency is generally determined from statistical analysis. The frequency of a particular flood event is usually expressed as occurring, on the average, once in a specified number of years or as a percent (%) chance of occurring in any given year.

Note: For example, a 100-year flood event is expected to occur, or be exceeded, on the average of once in every 100 years, or which has a 1% chance of occurring or being exceeded in any given year. Any particular flood event could, however, occur more frequently than once in any given year.

Floodfringe - that portion of the floodplain outside of the floodway, which is covered by flood water during the regional flood. The term, "floodfringe" is generally associated with standing water rather than flowing water.

Flood of record - the highest known flood, the elevation of which can be determined through the use of physical or photographic data.

Floodplain - land which has been or may be covered by flood water during the regional flood. The floodplain includes the floodway, floodfringe, shallow depth flooding, flood storage and coastal floodplain areas.

Flood storage - floodplain areas where storage of flood waters has been taken into account in reducing the regional flood discharge.

Floodway - the channel of a river or stream, and those portions of the floodplain adjoining the channel required to carry the regional flood discharge.

Hydraulic floodway lines - lines that delineate those portions of floodplain including the channel which are required to convey the regional flood discharge without any increase in regional flood heights.

Increase in regional flood height - a calculated upward rise in the regional flood elevation, equal to or greater than 0.01 foot, resulting from a comparison of existing conditions and proposed conditions which is directly attributable to development in the floodplain but not attributable to manipulation of mathematical variables such as roughness factors, expansion and contraction coefficients and discharge.

Municipality or municipal - a county, city or village.

Obstruction to flow - any development which physically blocks the conveyance of flood waters such that this development by itself or in conjunction with any future similar development will cause an increase in regional flood height.

Official floodway lines - the lines which have been approved by the department, adopted by the municipality, and which are shown on the official floodplain zoning maps and used for regulatory purposes. The official floodway lines are established assuming that the area landward of the floodway lines will not be available to convey flood flows.

Regional flood - a flood determined to be representative of large floods known to have occurred in Wisconsin of which may be expected to occur on a particular lake, river or stream once in very 100 years.

Note: The regional flood is based upon a statistical analysis of lake level or streamflow records available for the watershed or an analysis of rainfall and runoff characteristics in the watershed or both. 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 or be exceeded. During a typical 30-year mortgage period, the regional flood has a 26% chance of occurring.

Shallow depth flooding areas - areas where the maximum depth of flooding does not exceed one foot in depth nor 6 hours in duration during the regional flood.

Structure - 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 lake bed.

Water surface profile - a graphical representation showing the elevation of the water surface of a watercourse for each position along a reach of river or stream at a certain flood flow. A water surface profile of the regional flood is used in regulating floodplain areas.

RESPONSIBILITIES OF LOCAL UNITS OF GOVERNMENT

N.R. 116 specifies that municipalities shall adopt, administer, and enforce reasonable floodplain zoning ordinances within their respective jurisdictions. Floodplain maps and zoning ordinances shall regulate all floodplains, and the minimum limits for regulatory purposes shall be all areas covered by, or expected to be covered by, waters during the regional flood.

Methods are specified in N.R. 116 by which the regional flood shall be determined, and a water surface profile developed. Further, local units of government are required to upgrade their zoning ordinances within six months of new information such as: a) floodplain management statutes; b) floodplain management rules; c) floodplain management case law; d) new study data; and e) improved technical information and methods.

The strictest application of N.R. 116, then, is intended to regulate all activity within the limits of the floodplain (regional flood lines). Any structure, including highways and bridges, built within the limits of the regional flood, will increase the height of that flood by some amount. N.R. 116 requires local units of government to update their zoning ordinances whenever structures are built within the floodplain limits they have adopted.

EFFECTS ON DOT PROJECT ACTIVITY

N.R. 116 states that public utilities, streets, and bridges are uses permitted within the limits of the floodplain, provided that:

1. Adequate floodproofing measures are provided to the flood protection elevation; and
2. Except as provided in sub. (3), construction may not cause any obstruction to flood flows as reflected in the water surface profile based upon existing conditions.

(3) FLOODWAY DEVELOPMENT REQUIRING AMENDMENTS. Any development in a floodway which will cause an obstruction of flood flows may be authorized by the municipality, but only if amendments are made to the official floodway lines, regional flood profile, floodplain zoning maps and floodplain zoning ordinances in accordance with the criteria established in s. N.R. 116.11. All such amendments shall meet the provisions of s. N.R. 116.21 (6).

The DOT-DNR Cooperative Agreement states that DOT concurs in the spirit and intent of N.R. 116 and will provide DNR and affected local units of government with information indicating the criteria used in the design and placement of structures in relation to the regional flood. DOT will cooperate fully with local units of government in their efforts to minimize flooding effects and to meet their responsibilities in floodplain zoning.

DOT considers discharge capacities, backwater elevations, potential upstream and downstream water damages, and protection of the roadway in the design of any water-related structure. DOT also considers land use and the

property rights of present and future riparian and other affected property owners, upstream and downstream, consistent with the principle of just compensation.

For stream crossings involving new or replacement structures and for other floodplain encroachments, DOT shall compute the 100-year regional flood discharge and elevations in accordance with N.R. 116 and N.R. 320. In determining structure size and placement, DOT shall consider floodplain management standards pursuant to N.R. 116 and shall consider the hydraulic characteristics of the stream reach relative to existing impedances to flow. Upon completion of the design, predicted water surface elevations will be made available to the DNR, local unit of government, and the appropriate floodplain zoning authority. DOT or its authorized agent shall also notify affected property owners of the increase in the height of the regional flood as specified in N.R. 116 for the purpose of making appropriate legal arrangement with these property owners.

1. For streams that do not have floodplain zoning ordinances in effect:

Appropriate legal arrangements shall consist only of written notification to affected property owners which informs them of the predicted increase in the height of the regional flood and of their rights under Section 88.87, Wisconsin Statutes. Evidence of this notification shall be provided to DNR by DOT or its authorized agent.

2. For streams that do have floodplain zoning ordinances in effect:

Appropriate legal arrangements shall consist of written notification to affected property owners advising them of the change in the regional flood elevation on their property and, where consistent with the Constitutional principle of just compensation, of the acquisition of property rights or compensation prior to project construction for future damages through the purchase of flowage easements or other means of conveyance, through condemnation as provided in Chapter 32, Wisconsin Statutes, or through any other legally enforceable document signed by an affected property owner which acknowledges the extent of increased flood elevations and the property owners' legal right to compensation. Written notification to affected property owners shall inform them further of their rights under Section 88.87, Wisconsin Statutes, to file a claim after damage occurs from unreasonable or unnecessary water accumulation resulting from bridge construction and its impedance of water flow and shall solicit their comments concerning the change in flood elevation.

Evidence of written notification; or where appropriate, evidence of intent to acquire property rights, shall be provided to DNR by DOT or its authorized agent.

SPECIFIC PROCEDURES

Two requirements clearly intended under N.R. 116 and which might affect DOT project activity are:

1. That property owners be compensated in some manner through "appropriate legal arrangements", for an increase in backwater which affects the use or value of their land; and
2. That local units of government "agree" to changes in the height of the regional flood by amending their floodplain zoning ordinances to reflect these changes.

Regarding 1, any anticipated increase in backwater should be analyzed for the purpose of determining the extent of the impact on affected adjacent property owners that will result from the required amendment to the local floodplain zoning ordinance. For those stipulations where significant impacts are identified, the determination of what is "proper legal arrangements" should be made in consultation with the State Design Engineer of the Division of Highways and Transportation Services.

Regarding 2, it is the responsibility of DOT to coordinate with the affected local unit of government, and make a decision whether construction which creates a change in the height of the regional flood, is in the overall public interest. In doing so, DOT must notify the local government of the increase in backwater which would result from proposed construction. It is then the responsibility of the local unit of government to inform DOT of anticipated adverse effects so that they can be considered in making a decision which reflects the overall public interest.

In keeping with the spirit and intent of N.R. 116, and the Cooperative Agreement, DOT and the local unit must judge whether it would be in the best overall public interest for the flood plain zoning ordinance to be amended before construction begins. In areas susceptible to frequent flooding, in particular, amendment prior to construction could be desirable.

However, "acceptance" of the project through amendment of a zoning ordinance, or other "approvals", are not required in order to proceed with the project; provided proper notifications have been made, and DOT determines that the overall public interest will be served. Decisions must be made on a case-by-case basis involving close coordination with local units of government.