Ohio Department of Natural Resources
Division of Soil and Water Resources
Fact Sheet

Fact Sheet 98–48

Dam Safety: Construction Permits for Levees

Levees provide an important benefit to the citizens of Ohio by protecting areas from inundation by flood waters. A properly designed and well-constructed levee will provide its owner and the public with many years of service. Section 1521.06 of the Ohio Revised Code (ORC) requires that any person or government agency desiring to construct a levee first obtain a construction permit issued by the Chief of the Division. The purpose of this law is to protect life, health and property from damages due to failures of improperly designed or constructed levees. Supplementing the law are Ohio Administrative Code (OAC) Rules 1501:21-1-01 through 1501:21-24-01.

Classification of Levees

The classification of levees is outlined in OAC Rule 1501:21-13-09. The classification system divides levees into four classes–I, II, III and IV–based on the potential for damage should the levee fail. The Chief of the Division determines the class of a proposed levee during the preliminary design review (OAC Rule 1501:21-5-02) or of an existing levee during a periodic review or inspection (OAC Rule 1501:21-21-01.) Proper classification of levees is necessary to determine the design criteria needed to provide appropriate safety factors against failure. The following is a list of the criteria used to determine the classification of a proposed or existing levee:

CLASS	PROBABLE EFFECTS OF LEVEE FAILURE
Class I	probable loss of human life, structural collapse of at least one residence or one commercial or industrial business
Class II	disruption of a public water supply or wastewater treatment facility, or other health hazards; flooding of residential, commercial, industrial, or publicly owned structures; flooding of high-value property; damage or disruption to major roads including but not limited to interstate and state highways, and the only access to residential or other critical areas such as hospitals, nursing homes, or correctional facilities as determined by the chief; damage or disruption to railroads or public utilities
Class III	property losses including but not limited to rural buildings not otherwise described in this rule; damage or disruption to local roads including but not limited to roads not otherwise listed as major roads in this rule
Class IV	a levee having a height of not more than three feet; losses restricted mainly to the levee, owner's property and rural lands

In accordance with ORC Section 1521.062 and OAC Rule 1501:21-13-09, a levee may be reclassified at any time as a result of a change in circumstances not in existence at the time of the initial classification.

Is a Permit Required for this Levee?

A construction permit is required for Class I, II and III levees, but not for levees placed in Class IV. A construction permit is not required for modifications or repairs to existing levees provided that the modifications or repairs do not constitute an enlargement to the structure as defined by OAC Rule 1501:21-3-01. However, plans for modifications or repairs must be submitted to the Division for review and approval prior to construction in accordance with ORC Section 1521.062(F).

Applying for a Permit

The first step in obtaining a construction permit is to submit a preliminary design report. The contents of the preliminary design report are outlined in OAC Rule 1501:21-5-02. Within forty-five days of receipt of the preliminary design report, the applicant will be notified in writing of approval or disapproval of the report, and the classification of the structure will be designated.

If the preliminary design report is approved and the proposed levee requires a permit, the second step is to submit a final design submittal. The contents of the final design submittal are outlined in OAC Rules 1501:21-5-03 through 1501:21-7-01.

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Construction of any proposed levee may not begin until the applicant has received either a construction permit issued by the Chief of the Division of Soil and Water Resources or a notification that a permit is not required. The construction permit will contain terms that must be met, and may contain conditions that apply to the approved design and specifications.

Design Requirements

The safety factors of the various elements of the levee shall conform to good engineering practice as approved by the Chief of the Division. Specific design requirements may be found in OAC Rules 1501:21-13-01 through 1501:21-13-14.

A copy of the laws and administrative rules for dam safety is available on the Division of Water's website or by request. To arrange a meeting to discuss any design requirements or a proposed classification, please contact the Division of Water:

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