

Dam Failure Analysis (DFA) Detailed

Why

Ruled by NR 333.05, Link to Chapter 140 DAMS
(<http://dnr.wi.gov/topic/dams/documents/ch140dams.pdf>)

Based upon Failure of a Dam

Pg. 16, all new dam break profiles should be based upon failure of the dam during the 100 year flood.

When and Who

The Process: Pg. 66, Chapter 140, Dam Failure Analysis is submitted to the Department for one of the following reasons.

1. Because of a dam safety inspection if the inspecting engineer feels the dam poses a threat to life, health or property (basis for an Emergency Action Plan).
2. Because of the owner's initiative.
3. As the result of a dam reconstruction. What constitutes a dam reconstruction can be found on page 140-37 in Chapter 140 of the Water Regulation Guidebook.
4. Because of an application to construct a new dam.
5. Because of a floodplain study that incorporates the existence of dams.

The reviewer assigned to review and approve the dam failure analysis does so as outlined in the program guidance dated July 29, 1992, and assigns the PHR.

1. Based on what the consulting engineer has determined for a PHR and using all available data, the reviewer will confirm what the consultant has found or establish a different PHR for the dam.
 - a. A PHR is to be established based on existing land use control in place and approved by the Department as required by s. NR 333.06.
 - b. The assignment of the PHR must be made before the approval of any plans for construction or reconstruction of the dam. The plans must address the spillway capacity requirements of NR 333.07.
 - c. It is only possible for the reviewer to assign a FHR if the current land use and the current land use controls in place are not subject to change without Department approval.
2. The reviewer establishing the PHR sends an official determination and assignment of the PHR to the dam owner with the approval of the dam failure analysis. Any requirement to upgrade the spillway capacity to meet standards in NR 333.07 must be addressed in the approval letter. Appeal rights are to be included in the document.

How

The Details (<http://dnr.wi.gov/topic/dams/documents/ch140dams.pdf>) page 67, in chapter 140 (LINK)