

NOTE: Unofficial translation - for information only

## **Reg. no. 1317 of 18 December 2000: Regulations governing the classification of watercourse structures**

**DATE:** REG. no. 1317 of 18 December 2000  
**MINISTRY:** Ministry of Petroleum and Energy  
**DEP./DIR.:** Norwegian Water Resources and Energy Directorate  
**PUBLISHED:** I 2000 2825  
**ENTRY INTO FORCE:** 1 January 2001  
**MOST RECENTLY AMENDED:**  
**AMENDS:**  
**APPLIES FOR:** Norway  
REG no. 1271 OF 15 December 2000, Section 11-1, ACT no. 82 of 24 November 2000, Section 2, ACT no. 82 of 24 November 2000, Section 36, ACT no. 82 of 24 November 2000, Section 38, ACT no. 82 of 24 November 2000, Section 39, ACT no. 82 of 24 November 2000, Section 53, ACT no. 82 of 24 November 2000, Section 54, ACT no. 82 of 24 November 2000, Section 58  
**STATUTORY AUTHORITY:**

### **Regulations governing the classification of watercourse structures**

#### **Section 1. Purpose**

The purpose of the classification of watercourse structures is to adapt safety requirements, authorised in the regulations governing the safety and supervision of watercourse structures, to the consequences for the installations in the event of a failure.

#### **Section 2. Authority**

These regulations are administered by NVE.

#### **Section 3. Definitions**

In these regulations the following terms and definitions apply:

*Dam breach flood analysis* is the theoretical calculation of the flood wave in the watercourse resulting from a breach of a dam.

*The responsible party:* cf. section 1-3 of the regulations governing the safety and supervision of watercourse structures

*Watercourse structures:* cf. section 1-3 of the regulations governing the safety and supervision of watercourse structures

#### **Section 4. Classification criteria**

All watercourse structures shall be evaluated as to the consequences of a failure. If a failure of the watercourse structures may threaten the safety of people, the environment or property, it shall be classified in one of three main classes, where watercourse structures in class 3 have the greatest consequences in the event of a failure, cf. section 1-4 of the regulations governing the safety and supervision of watercourse structures. The classification criteria are the same for all watercourse structures.

In the classification, the evaluations shall be based on the part of the installation where a possible failure is assumed to have the greatest potential for damage resulting from a change in water level or a jet of water. The evaluation must be based on relevant maps and site surveys. When dam breach flood analysis exists, consideration shall be given to the results of this analysis.

The classification shall emphasise whether water resulting from a failure of a watercourse structure will come in contact with buildings or places where people forgather for a period of time.

A single-unit dwelling or a flat in a block or row house counts as a residential unit. Schools, nursing homes, companies, military camps, cabins, etc. and places where large crowds of people occasionally gather shall be converted to residential units. The conversion shall be based on the number of people and the length of time that they spend at the place.

Table 4.1: Criteria for the classification of watercourse structures.

Consequences in the event of a failure		Class
Classification	Potential for damage No. of residential units	
Major	> 20	3
Moderate	1 - 20	2
Minor	0	1

If a failure can inflict damage on infrastructure and other functions vital to society, which in turn may endanger human life, this shall be assessed separately. Failures that

result in damage to national and county roads and railway lines shall not be classified any lower than 2.

Loss of water and production and damage to production equipment, property and the environment shall be evaluated independently and may result in a higher class than in the cases where few or no residential units may come in contact with water as a result of a failure of the watercourse structure.

#### **Section 5.** *Classification*

The classification and reclassification, if any, shall be undertaken by the responsible entity and shall be submitted to NVE for approval.

If there is any doubt about the classification, NVE may require that a dam breach flood analysis be carried out or alternatively that the highest of the relevant classes be used.

The watercourse structure's class shall be determined in connection with the planning of a new installation. The checking of the class shall be included in the programme for the inspection of the watercourse structure, cf. section 7-2 of the regulations governing the safety and supervision of watercourse structures.

#### **Section 6.** *The regulations' entry into force*

The regulations enter into force on 1 January 2001.