

**Ministry of Agriculture and Forestry, Finland**

**NB: Unofficial translation; legally binding texts are those in Finnish and Swedish.**

**Dam Safety Act**

**494/2009**

(amendments up to 1511/2009 included)

**Chapter 1 – General provisions**

*Section 1 – Objective*

- (1) The objective of this Act is to ensure safety in the construction, maintenance and operation of a dam and reduce the hazard that may be caused by a dam.

*Section 2 – Scope of application*

- (1) This Act applies to dams and the structures and equipment which belong to these independent of the material of which the dam is constructed or how the dam has been constructed or the substance impounded by the dam.
- (2) The provisions concerning a dam laid down in this Act also apply to flood embankments.
- (3) This Act does not apply to sluice gate structures of canals.

*Section 3 – Relationship with other legislation*

- (1) In addition to this Act, the provisions of the Water Act (264/1961) and under it apply to construction in watercourses.
- (2) In addition to this Act, the provisions of the Environmental Protection Act (86/2000 and under it concerning the prevention of environmental pollution and the provisions of the Waste Act (1072/1965) and under it on preventing and combating the risk to health and the environment arising from wastes apply to waste dams.
- (3) As regards mine safety, the provisions of the Mining Act (503/1965) and under it also apply.
- (4) In addition to this Act, the provisions of the Land Use and Building Act (132/1999) concerning the permits required for building activities, structures and other action apply to dams.
- (5) The provisions on rescue service arrangements are laid down in the Rescue Act (468/2003).
- (6) The provisions of this Act shall be taken into account when making an official decision on the construction and use of a dam under the Water Act, Environmental Protection Act and Land Use and Building Act.

*Section 4 – Definitions*

- (1) In this Act:
  - 1) *dam* means a structure such as a wall or embankment the purpose of which it is to permanently or temporarily prevent the spread of a liquid or substance that behaves like a liquid impounded by the dam or to regulate the surface level of the impounded substance;
  - 2) *watercourse dam* means a dam in a watercourse;
  - 3) *waste dam* means a dam for impounding substances that are harmful or hazardous to health or the environment;

- 4) *flood embankment* means a structure the purpose of which is to prevent the spread of water at times when the water level of a watercourse or sea level is unusually high;
- 5) *owner of a dam* means the owner or manager of the dam or one whose task it is to see to the design, construction, operation and maintenance of the dam.

#### Section 5 – *Authorities (1511/2009)*

- (1) The Ministry of Agriculture and Forestry is responsible for the general steering, follow-up and development of activities under this Act.
- (2) The Centre for Economic Development, Transport and the Environment which is competent in dam safety matters functions as the dam safety authority referred to in this Act.
- (3) The Ministry of Agriculture and Forestry may order that a Centre for Economic Development, Transport and the Environment functions as the dam safety authority within the territory of another Centre for Economic Development, Transport and the Environment.

#### Section 6 – *Competence requirements*

- (1) A person who prepares the plan concerning the construction of a dam and a person who is responsible for the operation, monitoring and inspections of the dam must possess sufficient expertise in dam safety matters, taking account of the type of the dam and the hazard it may cause. Further provisions on the competence requirements are issued by Government Decree.

### Chapter 2 – **Planning, design and construction of a dam**

#### Section 7 – *General obligation*

- (1) A dam must be designed and constructed so that its use does not cause any danger to safety.
- (2) Further provisions on the hydrological dimensioning and technical safety requirements for the construction of a dam are issued by Government Decree.

#### Section 8 – *Planning and design of a dam*

- (1) The plan and design prepared for constructing a dam must show how the dam safety requirements under this Act have been taken into account.

#### Section 9 – *Dam safety studies in the case of permit*

- (1) In a permit application concerning the construction of a dam under another Act the owner of the dam must describe sufficiently the dam hazard and its impact on the dam dimensioning and design criteria.
- (2) When resolving a matter referred to in section 3(6) concerning the construction of a dam the authority shall request a statement from the dam safety authority concerning the fulfilment of the dam safety requirements laid down in this Act.
- (3) In the statement the dam safety authority shall, where necessary, present an estimation of the design criteria from the dam safety perspective.

### Chapter 3 – **Classification of a dam and dam safety documents**

#### Section 10 – *Classification obligation*

- (1) Before bringing into operation the dam must be classified and a dam break hazard analysis and monitoring programme must be approved for it as laid down in this Chapter.

### Section 11 – *Classification of a dam*

- (1) Based on the hazard the dam is placed in one of the following classes:
  - 1) Class 1 dam, which in the event of an accident causes danger to human life and health or considerable danger to the environment or property;
  - 2) Class 2 dam, which in the event of an accident may cause danger to health or greater than minor danger to the environment or property;
  - 3) Class 3 dam, which in the event of an accident may cause only a minor danger.
- (2) Classification need not be made if the dam safety authority considers that the dam does not cause any danger. However, the provisions of section 15 on the maintenance of a dam, section 16 on the operation of a dam, section 24 on preventing accidents and Chapter 6 on the control of these provisions apply to such a dam.

### Section 12 – *Dam break hazard analysis and emergency action plan*

- (1) To establish the hazard caused by a dam, the owner of a class 1 dam must prepare a more detailed analysis than that referred to in section 9 of the dam hazard to humans and property as well as the environment (*dam break hazard analysis*).
- (2) The dam safety authority may decide that the dam break hazard analysis must also be prepared on a dam other than class 1 dam if this is necessary for the classification of the dam or assessment of the need to change the class.
- (3) The owner of dam must prepare and regularly update a plan of measures in case of accidents and disturbances concerning a class 1 dam (*emergency action plan of a dam*).
- (4) Further provisions on preparing and updating of a dam break hazard analysis and emergency action plan of a dam are issued by Government Decree.

### Section 13 – *Monitoring programme*

- (1) The owner of a dam must prepare a programme concerning a classified dam on the monitoring of factors which may impact on dam safety when the dam is brought into operation and during operation (*monitoring programme*).
- (2) A specific monitoring programme is, however, not needed if similar factors are being monitored under other law in a way that is approved by the dam safety authority.
- (3) Further provisions on the preparation and content of the monitoring programme are issued by Government Decree.

### Section 14 – *Classification decision and approval of documents*

- (1) The dam safety authority makes a decision on the classification of a dam and approval of documents referred to in sections 12(1) and 13.
- (2) The owner of a dam must submit the explanatory note needed for the classification decision and monitoring programme as well as, where necessary, a dam break hazard analysis and emergency action plan of a dam to the dam safety authority well before the dam is to be brought into operation.
- (3) Before making the classification decisions and approval of documents referred to in subsection 2 the dam safety authority must give an opportunity to be heard to the owner of the dam and the rescue authority of the region concerned.
- (4) The decision shall be delivered to the owner of the dam, regional rescue authority and municipalities of the area affected by the dam.

## Chapter 4 – **Maintenance, operation and monitoring of a dam**

### Section 15 – *Maintenance obligation*

- (1) The owner of a dam is obligated to keep the dam in such a condition that it functions as intended and is safe.

#### Section 16 – *Operation of a dam*

- (1) A dam shall be operated in such a way that it causes no danger to human life and health.
- (2) Sufficient safety arrangements shall be in place for class 1 and 2 dams to ensure the safety of the operation of the dam. Further provisions on the safety arrangements are issued by Government Decree.

#### Section 17 – *Monitoring*

- (1) The owner of a dam must organise the monitoring of the condition and functioning of a classified dam in accordance with the monitoring programme.

#### Section 18 – *Annual inspection*

- (1) The owner of a dam shall inspect the condition and safety of a class 1 and 2 dam at least once a year. The owner of a dam must notify the written report prepared on the inspection of a class 1 dam to the dam safety authority.

#### Section 19 – *Periodic inspection*

- (1) The owner of a dam must organise a periodic inspection of class 1-3 dams at least every five years and, where necessary, more frequently, to which the dam safety authority and rescue authority has the right to participate.
- (2) A summary of the dam monitoring data from the past five years and a preliminary assessment of the condition of the dam by an expert who fulfils the competence requirements laid down in section 6 must be presented to the dam safety authority in good time before the inspection.
- (3) In the periodic inspection changes in the conditions of the dam and factors which impact on its safety are studied, with due account for the changes in land use and weather and hydrological conditions. If in the periodic inspection it cannot be established with sufficient certainty that the dam fulfils the safety requirements set for it, the owner of the dam must prepare a thorough study of the condition of the dam or its part (*condition study*).
- (4) The owner of a dam must notify the written report prepared on the inspection of a class 1 and 2 dam to the dam safety authority.

#### Section 20 – *Updating a dam break hazard analysis*

- (1) Based on a periodic inspection the dam safety authority may order the owner of a dam to update a dam break hazard analysis prepared for the dam.
- (2) The owner of a dam must deliver the updated dam break hazard analysis to the dam safety authority for approval in connection with the periodic inspection or separately.
- (3) The dam safety authority shall notify the decision on the approval of an updated dam break hazard analysis to the owner of the dam, rescue authority of the region concerned and municipalities of the area affected by the dam.

#### Section 21 – *Change of class*

- (1) The class of a dam may be changed by a decision of the dam safety authority if on the grounds detected in the inspection of the dam or otherwise the dam hazard can be considered to have changed in an essential way due to a change in circumstances.
- (2) The provisions of sections 11 and 14 on the classes and classification decision apply to a decision concerning the change of class.

- (3) The provisions of subsections 1 and 2 on the change of class also apply to a dam which has not been classified before by virtue of this Act. The owner of such a dam must deliver a report needed for the classification to the dam safety authority upon request.

#### Section 22 – *Alteration and repair works*

- (1) In addition to the provisions on the repair and alteration works of a dam laid down in other law, the provisions of Chapter 2 on the planning, design and construction of a dam and Chapter 3 on the classification and dam safety documents apply, as appropriate, to alteration and repair works which significantly impact on the structures of the dam or are otherwise significant as regards dam safety. Such alteration and repair works must be notified to the dam safety authority before they are implemented.

#### Section 23 – *Dam decommissioning*

- (1) A dam is recorded as removed from service to the information system of the dam safety authority when it is established in the inspection that the dam structure has been pulled down or the dam has been decommissioned in such a way that it can no longer cause hazard referred to in this Act. The inspection is performed in the presence of the dam safety authority after the obligations relating to pulling down a dam structure or dam decommissioning under other law have been fulfilled. The obligations under this Act cease to be applicable when the dam has been recorded as removed from service.

### Chapter 5 – **Preparing for dam accidents and action in the event of accidents**

#### Section 24 – *Preventing accidents*

- (1) The owner of a dam must, with due consideration of the dam hazard, take the necessary actions to prevent a dam accident and to limit the damages caused by an accident.

#### Section 25 – *Rescue service plans*

- (1) Provisions on rescue service are laid down in section 9 of the Rescue Act. The dam safety authority delivers the information in its possession necessary for preparing the rescue service plans as requested by the rescue authority.

#### Section 26 – *Rescue activity*

- (1) Provisions on rescue activity are laid down in the Rescue Act. The owner of a dam and dam safety authority must assist the head of the rescue activity in performing rescue activity. In addition, the dam safety authority participates, where necessary, in the work of the steering group referred to in section 44(3) of the Rescue Act.

#### Section 27 – *Emergency call and notice of an exceptional situation as regards safety*

- (1) Provisions on an emergency call to the Emergency Response Centre are laid down in section 28 of the Rescue Act. The owner of the dam must notify the emergency call made to the dam safety authority without delay.
- (2) The owner of the dam must give notice concerning an exceptional situation as regards dam safety which has occurred at the dam other than those referred to in subsection 1 to the dam safety authority without delay. The notice must describe the situation and give the necessary accounts for control measures to the dam safety authority. Where necessary, the dam safety authority delivers the notice to the regional rescue authority.

### Chapter 6 – **Control and coercive measures**

#### Section 28 – *Communication*

- (1) In addition to provisions laid down in the Act on the Openness of Government Activities (621/1999), the dam safety authority shall communicate and keep available information on the dam hazard.

#### Section 29 – *Right of inspection*

- (1) The dam safety authority has the right to perform the necessary inspections at the dam to control the compliance with this Act and provisions issued under it.

#### Section 30 – *Remedying an infringement or neglect*

- (1) As far as the infringement does not concern other law as well, the dam safety authority may prohibit one who violates this Act or provisions issued under it from continuing or repeating an action which violates the provision or order that the obligation shall be fulfilled.
- (2) Before issuing a prohibition or order the dam safety authority shall, as far as possible, negotiate with the party who has violated this Act or provisions under it.

#### Section 31 – *Order to remedy or rectify*

- (1) In addition to the provisions of section 30, the dam safety authority may order that rectifying, remedial or communication measures are to be implemented within the time and in a manner determined by the dam safety authority if an immediate danger related to the dam can be efficiently prevented or the magnitude of the danger essentially reduced through such a measure.

#### Section 32– *Penalty payment and threat of interruption and of having action taken at the defaulter's expense*

- (1) The dam safety authority may reinforce a prohibition or order it has issued by a penalty payment or threat of taking the neglected action at the defaulter's expense or that the activity is interrupted.
- (2) Otherwise the provisions of the Penalty Payment Act (1113/1990) apply to the penalty payment and threat of interruption and of having action taken at the defaulter's expense.

### Chapter 7 – **Miscellaneous provisions**

#### Section 33 – *Information systems*

- (1) The Finnish Environment Institute maintains an information system for control of dams under this Act. (1511/2009)
- (2) The owner of a dam must provide his or her contact information and information on the staff operating the dam as well as technical information concerning the dam laid down by Government Decree to the dam safety authority to be entered to the information system.
- (3) The dam safety authority and owner of the dam must keep up-to-date printouts from the information system for each dam as well as other important documents as regards dam safety so that these are readily available in case of disturbances (*dam safety file*).
- (4) The owner of a dam must notify essential changes in information referred to in subsection 2 to the dam safety authority. When the owner of the dam changes the owner who gives up the ownership must deliver the dam safety file to the new owner and notify the dam safety authority of the change of the owner.

#### Section 34 – *Environmental violation and violation involving public danger*

- (1) The penalty for impairment of the environment, aggravated impairment of the environment, environmental infraction and negligent impairment of the environment committed contrary to this Act or provisions or orders issued under it is laid down in Chapter 48, sections 1–4 of the Criminal Code (39/1889).
- (2) The penalty for criminal mischief, aggravated criminal mischief, negligent endangerment or gross negligent endangerment committed by creating a water flood is laid down in Chapter 34, sections 1, 3, 7 and 8 of the Criminal Code.

*Section 35 – Dam safety offence*

- (1) One who intentionally or through negligence
  - 1) neglects the preparation of a dam break hazard analysis referred to in section 12(1), emergency action plan of a dam referred to in section 12(3) or monitoring programme referred to in section 13(1) or the delivery of these documents or an explanatory note referred to in section 14(2) to the dam safety authority,
  - 2) brings a dam into operation contrary to section 10 before the classification of the dam or approval of dam safety documents,
  - 3) operates the dam contrary to section 16(1) or neglects the technical safety arrangement referred to in section 16(2),
  - 4) neglects the maintenance of a dam referred to in section 15, monitoring referred to in section 17, annual inspection referred to in section 18, organisation of a periodic inspection referred to in section 19 or the updating of a dam break hazard analysis and its delivery to the dam safety authority under section 20,
  - 5) neglects the obligation to take the necessary action to prevent a dam accident and to limit the damage caused by an accident laid down in section 24,
  - 6) neglects giving a notice referred to in section 27(2) or the delivery of information referred to in section 33(2) to the dam safety authority, or
  - 7) undertakes repair or alteration works of a dam contrary to section 22,shall be sentenced to a fine for a dam safety offence, unless a more severe penalty is laid down elsewhere in the law.

*Section 36 – Entry into force and transitional provisions*

- (1) This Act enters into force on 1 October 2009.
- (2) This Act repeals the Dam Safety Act of 1 June 1984 (413/1984), as amended.
- (3) The Ministry of Agriculture and Forestry decides on the placement of dams constructed before the entry into force of this Act into classes referred to in section 11.
- (4) Periodic inspection referred to in section 19 shall be performed on dams constructed before the entry into force of this Act within five years from the previous periodic inspection under the safety monitoring programme to which the dam safety authority has participated, but no more than five years from the entry into force of this Act. Documents referred to in sections 12 and 13 above shall be delivered to the dam safety authority for approval in the first periodic inspection organised after the entry into force of this Act.
- (5) If in other law reference is made to the Dam Safety Act in force upon the entry into force of this Act, this Act is applied instead.