

# Appendix 1

## Abbreviations and Definitions

### Abbreviations

ANCOLD	Australian National Committee on Large Dams
AFC	Acceptable Flood Capacity
DDC	Disaster District Co-ordinator
DDDC	Disaster District Co-ordination Committee
DOC	Designer's Operating Criteria
DOMM	Detailed Operating and Maintenance Manual
EAP	Emergency Action Plan
FSL	Full Supply Level
IFF	Imminent Failure Flood
LGCDC	Local Government Counter Disaster Committee
NR&M	Department of Natural Resources and Mines
PMF	Probable Maximum Flood
PMP	Probable Maximum Precipitation
RPEQ	Registered Professional Engineer (Queensland)
SOP	Standing Operating Procedures

### Definitions

**Abutment:** That part of the valley side against which the dam is constructed.

**Annual exceedance probability:** The probability of a specified event being exceeded in any year.

**Appurtenant Works:** All ancillary structures of a dam including, but are not limited to, spillways, inlet and outlet works, tunnels, pipelines, penstocks, power stations and diversions.

**Catchment:** The land surface area, which drains into a dam or to a specific point.

**Category 1 failure impact rating:** A category of referable dam under *Water Act 2000*. The population at risk has been determined as between 2 and 100 persons inclusive.

**Category 2 failure impact rating:** A category of referable dam under *Water Act 2000*. The population at risk has been determined as greater than 100 persons.

**Chief Executive:** Chief executive of the Government Department (Qld) responsible for administering the dam safety provisions of the *Water Act 2000*. At the time of writing this was NR&M.

**Collapse:** The physical deformation of a structure to the point where it no longer fulfils its intended function.

**Controlled Document:** A document subject to managerial control over its contents, distribution and storage.

**Dam:**

- (a) works that include a barrier, whether permanent or temporary, that does or could or would impound, divert or control water and
- (b) the storage area created by the works. The term includes an embankment or other structure that controls the flow of water and is incidental to works mentioned in (a).

The term does not include the following -

- A rainwater tank
- A water tank constructed of steel or concrete or a combination of steel or concrete
- A water tank constructed of fibreglass, plastic or similar material

**Dams Engineer:** An engineer who is suitably qualified and experienced and who is recognised by the engineering profession as experienced in the engineering of dams.

**Decommissioned Dam:** A dam that has been taken out of service and which has been rendered safe in the long term.

**Designers Operating Criteria (DOC):** Comprehensive operating criteria, which stress the designers, intended use and operation of equipment and structures in the interest of safe, proper, and efficient use of the facilities.

**Emergency:** An emergency in terms of dam operation is any condition, which develops unexpectedly, endangers the integrity of the dam and requires immediate action.

**Emergency Action Plan (EAP):** A continually updated set of instructions and maps to deal with emergency situations or unusual occurrences at dam.

**Failure (Dam):**

- the physical collapse of all or part of the dam or
- the uncontrolled release of any of its contents.

**Flood Control Dam:** A dam which temporarily stores or controls flood runoff and includes dams used to form flood retarding basins.

**Foundation:** The undisturbed material on which the dam structure is placed.

**Freeboard:** The vertical distance between a stated water level and the lowest level of the non overflow section of the dam.

**Full Supply Level (FSL):** Means the level of the water surface when the water storage is at maximum operating level when not affected by flood.

**Height of Dam:** Means the measurement of the difference in level between the natural bed of the watercourse at the downstream toe of the dam or, if the dam is not across a watercourse, between the lowest elevation of the outside limit of the dam and the top of the dam.

**Imminent Failure Flood (IFF):** The flood event which when routed through the reservoir just threatens failure of the dam. The reservoir is assumed to be initially at maximum normal operating level.

**Incident:** An event which could deteriorate to a very serious situation or endanger the dam.

**Inspection (Dam):** A careful and critical examination of all physical aspects of a dam.

**Inspector:** A technical person suitably trained to undertake dam safety inspections

**Maintenance:** The routine work required to maintain existing works and systems (civil, hydraulic, mechanical and electrical and computer hardware/software) in a safe and functional condition.

**Monitoring:** The collection and review of data to assess the performance and behavioural trends of a dam and appurtenant structures.

**Operator:** The person, organisation, or legal entity which is responsible for the control, operation and maintenance of the dam and/or reservoir and the appurtenant works.

**Outlet works:** The combination of intake structure, screen, conduits, tunnels and valves that control discharge.

**Owner:** The owner of land on which the dam is constructed or proposed to be constructed.

**Probable Maximum Flood (PMF):** The flood resulting from PMP and, where applicable, snowmelt, coupled with the worst flood-producing catchment conditions that can be realistically expected in the prevailing meteorological conditions.

**Probable Maximum Precipitation (PMP):** The theoretical greatest depth of precipitation for a given duration that is physically possible over a particular drainage basin.

**Referable Dam:** A dam is a referable dam if:

- a failure impact assessment is required to be carried out for the dam and
- the assessment states the dam has a category 1 or 2 failure impact rating and the chief executive accepts the assessment.

**Registered Professional Engineer (RPEQ):** A registered professional engineer, a professional engineering company or a registered professional engineering unit as defined under the Professional Engineers Act 1988 (Qld).

**Remedial Work:** Any work required to rectify a deficiency to an adequate safety standard.

**Reservoir:** An artificial lake, pond or basin for storage, regulation and control of water, silt, debris or other liquid or liquid carried material.

**Reservoir Capacity:** The total or gross storage capacity of the reservoir up to full supply level excluding flood surcharge.

**Risk:** The probability of an adverse event. The likelihood of a dam failure occurring with adverse consequences (“chance of failure to perform” or “chance of harm” are alternative definitions).

**Safety Review:** The assessment of dam safety by methodical examination of all design and surveillance records and reports, and by the investigation and analysis of matters not addressed previously or subject to new design criteria.

**Spillway:** A weir, conduit, tunnel or other structure designed to permit discharges from the reservoir when pondage levels rise above the full supply level.

**Spillway Crest:** The uppermost portion of the spillway overflow section.

**Surveillance:** Ongoing monitoring and review of the condition of a dam and its appurtenant structures; and the review of operation, maintenance, monitoring procedures and results in order to determine whether a hazardous trend is developing or is likely to develop.

**Tailwater Level:** The level of water in the discharge channel immediately downstream of the dam.

**Toe of Dam:** The junction of the downstream (or upstream) face of dam with the ground surface (foundation); sometimes 'Heel' is used to define the upstream toe of a concrete gravity dam.

**Top of Dam:** The elevation of the uppermost surface of the dam proper, not taking into account any camber allowed for settlement, kerbs, parapets, guardrails or other structures that are not a part of the main water retaining structure. This elevation may be a roadway, walkway or the non-overflow section of the dam.

