

Dam Safety Act, 2006

12 of 2006

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An Act to provide for proper surveillance, inspection, operation and maintenance of all large dams in the State of Bihar to ensure their safe functioning. Be it enacted by the Legislature of the State of Bihar in the Fifty Seventh Year of the Republic of India as follows :-

1. Assented by Governor of Bihar on 25.4.2006, published in Bihar Gazette (Ex. Ord.) dated 3.5.2006.

1. Short Title Extent And Commencement :-

- (1) This Act, may be called the Dam Safety Act, 2006
- (2) It shall extend to the whole of the State of Bihar
- (3) It shall come into force on such date as the State Government may by notification in the Official Gazettee, appoint.

2. Declaration As To Expediency Of Control By State Government :-

It is hereby declared that it is expedient in the public interest to ensure proper surveillance, inspection, operation and maintenance of all large dams in this state to the extent hereinafter provided.

3. Definitions :-

In this Act unless the context otherwise requires :-

(1) "Dam" means any artificial barrier including appurtenant works which have been constructed across rivers or tributaries thereof with a view to impound or divert water.

(2) "Large Dam" means any artificial barrier including appurtenant work which does or will impound or divert water and which :

(a) Is above 15 meters in height, measured from the lowest portion of the general foundation area to the crest and/or

(b) Is between 10 meters to 15 meters in height and satisfies at least one of the following conditions :

(i) the length of crest is not less than 500 meters, or

(ii) the capacity of the reservoir formed by the dam is not less than 1 million cubic meters, or

(iii) the maximum flood discharge dealt with by the dam is not less than 2000 cubic meters per second.

(iv) the dam has specially difficult foundation problems

(3) "Reservoir" means any water-spread basin which contains or will contain impounded water.

(4) "Owner" means who owns controls, operates, and maintains a dam or a reservoir or his authorized representative and could be the Central/ State Government, State Undertaking or any other dam owning Organization including private entities/bodies.

(5) "Dam Safety Organization" refers to the set-up created at the Centre by the Government of India in Central Water Commission headed by a Chief Engineer which acts as co-ordinator for all dam safety related activities in respect of large dams all over the country and assistance to the owners in this regard as required.

(6) "State Dam Safety Organization" (SDSO) refers to the organization set up/to be set up by the State Government as per clause 5 below and entrusted with the functions detailed therein.

(7) "State Dam Safety Organization" refers to those owners of dams where the owners are not State/Central Government. These could be Central Government undertakings like NHPC or State Government undertaking like BBMB, DVC, etc., or could also be private organizations/companies.

(8) "State Dam Safety Cell" refers to dam safety units set up/to be set up by the dam owning organization within their organizations as per Clause 5 below for taking up the works as enumerated therein.

(9) "National Committee on Dam Safety" refers to the committee set up by the Government of India, Ministry of Water Resources in

1987 and referred to in Clause-5(14) hereinafter.

(10) "State Dam Safety Committee" refers to the committee to be set up by the State Government for performing the functions in terms of Clause 5(15) below.

(11) "Alteration", "Repairs" or either of them mean only such alterations or repairs as may directly affect the safety of the dam or reservoir.

(12) "Enlargement" means any change in the scope of an existing dam or reservoir, which raises water storage elevation of the water impounded by the dam.

(13) "Appurtenant works" include, but are not limited to, such structure as spillways, either in the dam or separate there from; the reservoir and its rim; low level outlet works and water conduits such as tunnels, pipelines or penstocks, either through the dam or its abutments.

4. General Provisions Of Supervisions, Investigations, Design And Construction :-

(1) It is the intent of this Act, to provide for surveillance, inspection and maintenance of all large dams and reservoirs to the extent required for the protection of public safety. The term "Dam" wherever it occurs in the following paragraphs shall mean a large dam as defined in 3(2) above.

(2) All large dams shall be investigated, designed and constructed by Organizations consisting of qualified, experienced and competent engineers and recognized by the Government.

(3) Nothing in this Act, shall be construed to relieve an owner or operator of a dam or reservoir, of the duties, obligations and the State/Dam owning Organization of its obligations or liabilities incidental to the construction, operation, maintenance and supervision of the dam or reservoir.

5. Administrative Provisions :-

(1) State/Dam owning Organization shall constitute a body called "State Dam Safety Organization" (SDSO)/State Dam Safety Cell headed by an officer not below the rank of Superintending Engineer or equivalent. The SDSO/DSC will be manned by competent technical people and adequately staffed and funded. The staffing pattern shall depend upon the number of large dams and shall be sufficient enough so that the organization/cell functions effectively and efficiently.

(2) All dams and reservoirs in the State, including those owned by other organizations would be under the jurisdiction of the "State Dam Safety Organization" (SDSO) of the State in so far as inspections of dams, analysis of information and making reports, recommendations regarding safety status of the dams and remedial measures to be undertaken in dams to improve their safety.

Dam Safety Cell in Organization

(3) All organizations owning dams should have a Dam Safety Cell. However, all dams and reservoirs in the Organization would be under jurisdiction of the State Dam Safety Organization (SDSO) for some specific activities as mentioned in Clause 5(2) hereinabove.

(4) State/Dam Owning Organization shall issue executive orders for inspection, maintenance and surveillance of dams, on the advice of the Dam Safety Organization (SDSO)/Dam Safety Cell (DSC). The State Government/Dam Owning Organization will earmark sufficient and specific maintenance and repairs grants to implement the recommendations of the DSO/Dam Safety Cell.

(5) The follow up action in monitoring the implementation of the executive order shall be done by the Dam Safety Organization of the State/Dam Safety Cell of the Organization.

(6) Technical documentation of all identified large dams shall be compiled by the owner and kept for record in the Dam Safety Organization of the State/Dam Safety Cell of the Organization.

(7) The State Dam Safety Organization or the Dam Safety Cell of the Organization will report directly to the Highest Engineering/Technical Authority of Water Resources Department of State. Similarly the Dam Safety Cell will also report to the highest engineering officer of the Organization.

(8) The Dam Safety Organization (SDSO)/Dam Safety Cell of the organization shall maintain liaison with Dam Safety Organization of Central Water Commission for necessary interaction/technical assistance as required.

Inspection of Dams

(9) Pre-monsoon and post monsoon inspections of the dam shall be done by an engineer not below the rank of an Executive Engineer. Periodic inspection programme should include pre-monsoon, post-monsoon inspection and also special inspections during and after floods, earthquake and if any sign of distress or peculiar behaviour is noticed.

(10) A responsible engineer should be stationed at site throughout the monsoon period. The responsible engineer will be decided by the concerned Executive Engineer (or equivalent) in charge of large

dams by assigning priority depending upon the number of large dams and other site conditions in consultation with the State Dam Safety Organization/Dam Safety Cell.

(11) The report of the inspection shall be forwarded to the State Dam Safety Organization/Dam Safety Cell of the Organization who will report to the highest authority as in 5(7).

(12) For the purpose of enabling it to make decisions as compatible with public safety, the State Dam Safety Organization and other Dam Owning Organization shall make or cause to be made such investigations and shall gather or cause to be gathered such data as may be needed for proper review and study of the various features of the design, construction, repair and enlargement of dams, reservoirs and appurtenances.

(13) The State Dam Safety Organization/Dam Safety Cell of the Organization shall also make or cause to be made from time to time such water-shed investigations and studies as may be necessary to keep abreast of all developments affecting stream run-off to facilitate decisions.

National Committee on Dam Safety (NCDS)

(14) Government of India, Ministry of Water Resources reconstituted the Standing Committee as the National Committee on Dam Safety vide their Office Memorandum No. 17.11.86-IT dated 19.10.1987.

The terms of reference to the Committee are as under:

(a) To monitor the follow up action on the report on Dam Safety Procedures both at the Centre and at the State level.

(b) To inspect dam safety activities in various states and suggest improvements to bring dam safety practices in line with latest state-of art consistent with Indian conditions.

(c) To act as a forum for exchange of view on techniques adopted for remedial measures to relieve distress.

(15) State Dam Safety Committee (SDSC) (15) The State shall establish Dam Safety Committee to establish priorities for safety works on the basis of information provided by the State Dam Safety Organizations. The composition and role of the State Dam Safety Committee shall be as follows:

(a) The State Dam Safety Committee shall comprise appropriate Chief Engineers of the State and may include other experts (for example from CWC, GSI, academic or technical institutions) as decided by the State. The Committee shall be chaired by the Secretary, Water Resources or Engineer-in-Chief, Water Resources. The head of the SDSO will be Member-Secretary of the Committee.

(b) The State Dam Safety Committee shall:

- * review the work done by the State Dam Safety Organization (SDSO) & Dam Safety Cell of the Organization :

- * review the progress on actions recommended in relation to dam safety:

- * establish priorities for further investigations, as necessary, and assign responsibilities for execution including: the use of non-departmental resources, and need for the association of independent experts for specific investigations :

- * establish priorities among projects needing remedial safety works; and

- * keep the State Government informed of its activities and recommendations.

(c) The Committee shall meet at least once in six months, but meeting may be called as deemed necessary by the Chairman, or the Member-Secretary.

(d) The NCDS will also review the work of Dam Safety Cells in the State.

6. Comprehensive Safety Evaluation Of Existing Large Dams

:-

(1) The State Dam Safety Organization and other Dam Owning Organizations shall from time to time, but not less than once in ten years, arrange for the comprehensive safety evaluation of all large dams either through their own engineers or by independent panel of experts for the purpose of determining the condition of dams and reservoirs.

(2) The State Dam Safety Organization shall report the results of the Comprehensive safety evaluation directly to the highest engineering/technical authority of Water Resources Department of State and to the State Dam Safety Committee. The Dam Safety Cell shall also report likewise to the highest engineering authority of the organization and to the SDSC.

(3) Where the Dam Safety Organization of State/Dam Safety Cell of the Organization or the panel of experts have suggested remedial action, the State Dam Safety Organization will pursue with the Project Authorities/Dam Owning Organization to see that these remedial measures are carried out in time, for which the State Government/Dam Owning Organization shall provide adequate funds.

(4) Where there are unresolved points of issues between the panel

of experts and the Project Authorities, the matter shall be referred to the State Dam Safety Organization. In case, no agreement is reached there, the matter will be referred to the DSO, Central Water Commission who shall give required guidance wherever necessary and send their recommendations to the State Government/Head of the Organization concerned for implementation.

7. Initial Filling Of Reservoirs :-

(1) Before initial filling of any reservoir impounded by a large dam, the filling criteria shall be drawn up by the designers, to profile a planned programme of filling with adequate time for monitoring and evaluating performance of the dam its appurtenances as the reservoir is being filled for the first time.

(2) Before the reservoir filling is taken up, the State Dam Safety Organization/ Dam Safety Cell shall arrange for safety inspection of the dam either through its own engineers or by independent panel of experts. This panel shall also examine the initial filling programme.

8. Emergency Action Planning And Disaster Management :-

(1) Disaster Management and Emergency action plans should be prepared for all large dams. For projects going to be commissioned such plans should be prepared before initial filling of the reservoir.

(2) The Disaster Management Emergency Action Plan should identify in advance the type of emergencies which are likely to occur in the operation of any reservoir. This will include identification of probable areas, population, structures and installations likely to be adversely affected due to flood water released from the reservoir or likely catastrophic floods in the event of any failure of the dam.

(3) These plans should include advance preparations to be made for handling efficiently and in the best possible manner the likely adverse situations especially to avoid loss of human life.

(4) Emergency flood warning/inflow forecasting system should be established for all large dams.

9. Annual Report Of Safety Status Of Dams :-

(1) The State Dam Safety Organization/Dam Safety Cell of the Organization shall prepare annual report of its activities and safety

status of dams in the State and this report shall be sent to the State Government/Head of the Organization. A copy of this report shall also be sent to the Central Water Commission, New Delhi.

(2) The State Dam Safety Organization/Dam Safety Cell of the Organization shall provide to DSO, Central Water Commission, documentation of the projects, annual report of status of dams and report of enquiries into failure and such other data as required or in such other format or manner as it may prescribe.

(3) The Dam Safety Organization, Central Water Commission will prepare a consolidated annual report and submit it to the Ministry of Water Resources, Government of India.