

ARTICLE 10.5. REGULATION OF DAMS

Rule 1. Application and Administration

312 IAC 10.5-1-1 Application of article

Authority: IC 14-27-7.5-8
Affected: IC 14-27-7.5

Sec. 1. This article:

- (1) governs an activity that is controlled by IC 14-27-7.5; and
- (2) establishes definitions and creates procedures related to hazard classifications.

(Natural Resources Commission; 312 IAC 10.5-1-1; filed Jan 26, 2007, 10:45 a.m.: 20070221-IR-312060092FRA)

312 IAC 10.5-1-2 Administration

Authority: IC 14-27-7.5-8
Affected: IC 14-27-7.5

Sec. 2. (a) The division administers IC 14-27-7.5 and this article.

(b) Unless otherwise specified, the division director or a designate of the division director shall take any action that is appropriate for the implementation of IC 14-27-7.5 and this article. *(Natural Resources Commission; 312 IAC 10.5-1-2; filed Jan 26, 2007, 10:45 a.m.: 20070221-IR-312060092FRA)*

Rule 2. Definitions

312 IAC 10.5-2-1 Applicability

Authority: IC 14-27-7.5-8
Affected: IC 14-27-7.5

Sec. 1. The definitions in:

- (1) IC 14-27-7.5-2 through IC 14-27-7.5-6;
- (2) 312 IAC 1; and
- (3) this rule;

apply throughout this article. *(Natural Resources Commission; 312 IAC 10.5-2-1; filed Jan 26, 2007, 10:45 a.m.: 20070221-IR-312060092FRA)*

312 IAC 10.5-2-2 "Appurtenant works" defined

Authority: IC 14-27-7.5-8
Affected: IC 14-27-7.5

Sec. 2. "Appurtenant works" means auxiliary features of a dam that are reasonably required for the safe and proper operation of the structure. The term may include each of the following:

- (1) The spillway system.
- (2) Outlet works.
- (3) Gates and valves.
- (4) Tunnels.
- (5) Conduits.
- (6) Levees.
- (7) Embankments.

(Natural Resources Commission; 312 IAC 10.5-2-2; filed Jan 26, 2007, 10:45 a.m.: 20070221-IR-312060092FRA)

312 IAC 10.5-2-3 "Dam" defined

Authority: IC 14-27-7.5-8

Affected: IC 14-27-7.5-1

Sec. 3. "Dam" means an artificial manmade barrier, including appurtenant works, that meets the conditions as given in IC 14-27-7.5-1. *(Natural Resources Commission; 312 IAC 10.5-2-3; filed Jan 26, 2007, 10:45 a.m.: 20070221-IR-312060092FRA)*

312 IAC 10.5-2-4 "Design storm event" defined

Authority: IC 14-27-7.5-8

Affected: IC 14-27-7.5

Sec. 4. "Design storm event" means the depth of precipitation that is used to calculate the volume and time distribution of runoff from a watershed that a spillway system must safely pass without jeopardizing the safety of the dam. The depth of precipitation typically ranges from fifty percent (50%) to one hundred percent (100%) of probable maximum precipitation, depending upon the hazard classification. *(Natural Resources Commission; 312 IAC 10.5-2-4; filed Jan 26, 2007, 10:45 a.m.: 20070221-IR-312060092FRA)*

312 IAC 10.5-2-5 "Division" defined

Authority: IC 14-27-7.5-8

Affected: IC 14-27-7.5

Sec. 5. "Division" means the division of water of the department. *(Natural Resources Commission; 312 IAC 10.5-2-5; filed Jan 26, 2007, 10:45 a.m.: 20070221-IR-312060092FRA)*

312 IAC 10.5-2-6 "Division director" defined

Authority: IC 14-27-7.5-8

Affected: IC 14-27-7.5

Sec. 6. "Division director" means the director of the division. *(Natural Resources Commission; 312 IAC 10.5-2-6; filed Jan 26, 2007, 10:45 a.m.: 20070221-IR-312060092FRA)*

312 IAC 10.5-2-7 "Maximum breach inundation area" defined

Authority: IC 14-27-7.5-8

Affected: IC 14-27-7.5

Sec. 7. "Maximum breach inundation area" means the downstream area that would be affected by flooding from an uncontrolled release of a dam's contents when:

- (1) the impoundment is at maximum design pool elevation;
- (2) the downstream area is flooded from the spillway discharge when the dam breaches; and
- (3) conditions exist that would result in the highest hazard potential for:
 - (A) property damage; or
 - (B) the possible loss of human life;

if the dam fails.

(Natural Resources Commission; 312 IAC 10.5-2-7; filed Jan 26, 2007, 10:45 a.m.: 20070221-IR-312060092FRA)

312 IAC 10.5-2-8 "Maximum design pool elevation" defined

Authority: IC 14-27-7.5-8
Affected: IC 14-27-7.5

Sec. 8. "Maximum design pool elevation" means the highest water level impounded by the dam resulting from the design storm event, assuming both of the following:

- (1) No:
 - (A) debris blockage;
 - (B) unplanned restrictions; or
 - (C) improper operation;

of the spillway system.

- (2) Prestorm water level at the level of the principal spillway.

(Natural Resources Commission; 312 IAC 10.5-2-8; filed Jan 26, 2007, 10:45 a.m.: 20070221-IR-312060092FRA)

312 IAC 10.5-2-9 "Occupied quarters" defined

Authority: IC 14-27-7.5-8
Affected: IC 14-27-7.5

Sec. 9. "Occupied quarters" means a structure that is or may be used for any of the following:

- (1) Human living quarters.
- (2) Business.
- (3) Medical services.
- (4) Education.
- (5) Place of worship.
- (6) Public office.
- (7) Industrial facilities.
- (8) Permanent or temporary overnight lodging for humans.

(Natural Resources Commission; 312 IAC 10.5-2-9; filed Jan 26, 2007, 10:45 a.m.: 20070221-IR-312060092FRA)

312 IAC 10.5-2-10 "Probable maximum precipitation" or "PMP" defined

Authority: IC 14-27-7.5-8
Affected: IC 14-27-7.5

Sec. 10. "Probable maximum precipitation" or "PMP" means the greatest theoretical depth of precipitation for a given duration that is physically possible over a given size storm area at a particular geographical location, based upon National Weather Service hydrometeorological reports. *(Natural Resources Commission; 312 IAC 10.5-2-10; filed Jan 26, 2007, 10:45 a.m.: 20070221-IR-312060092FRA)*

312 IAC 10.5-2-11 "Professional engineer" defined

Authority: IC 14-27-7.5-8
Affected: IC 14-27-7.5; IC 25-31

Sec. 11. "Professional engineer" means an individual who, because of special knowledge of the:

- (1) mathematical and physical sciences; and
- (2) principles and methods of engineering analysis and design;

that are acquired by education and practical experience, is qualified to engage in the practice of engineering, as attested by the individual's registration as a professional engineer and license to practice engineering in Indiana under IC 25-31. *(Natural Resources*

Commission; 312 IAC 10.5-2-11; filed Jan 26, 2007, 10:45 a.m.: 20070221-IR-312060092FRA)

312 IAC 10.5-2-12 "Spillway system" defined

Authority: IC 14-27-7.5-8

Affected: IC 14-27-7.5

Sec. 12. "Spillway system" means a structure or structures that conveys flow through, around, or over the dam. A spillway system typically consists of the following:

- (1) A principal spillway.
- (2) An emergency spillway.
- (3) A drawdown mechanism.

(Natural Resources Commission; 312 IAC 10.5-2-12; filed Jan 26, 2007, 10:45 a.m.: 20070221-IR-312060092FRA)

Rule 3. Hazard Classification

312 IAC 10.5-3-1 Consideration of hazard classification

Authority: IC 14-27-7.5-8

Affected: IC 14-27-7.5

Sec. 1. (a) The division shall assign whether a dam is classified as:

- (1) high hazard;
- (2) significant hazard; or
- (3) low hazard;

based on best information available.

(b) In making the determination of assignment under subsection (a), the division shall apply existing U.S. Army Corps of Engineers Phase 1 reports and other appropriate documentation.

(c) The division may also consider observations of the dam and the vicinity of the dam, including the risk posed to human life and property if the dam fails.

(1) If an uncontrolled release of the structure's contents due to a failure of the structure may result in any of the following, the dam shall be considered high hazard:

- (A) The loss of human life.
- (B) Serious damage to:
 - (i) homes;
 - (ii) industrial and commercial buildings; or
 - (iii) public utilities.
- (C) Interruption of service for more than one (1) day on any of the following:
 - (i) A county road, state two-lane highway, or U.S. highway serving as the only access to a community.
 - (ii) A multilane divided state or U.S. highway, including an interstate highway.
- (D) Interruption of service for more than one (1) day on an operating railroad.
- (E) Interruption of service to an interstate or intrastate utility, power or communication line serving a town, community, or significant military and commercial facility, in which disruption of power and communication would adversely affect the economy, safety, and general well-being of the area for more than one (1) day.

(2) If an uncontrolled release of the structure's contents due to a failure of the structure may result in any of the following, the dam shall be considered significant hazard:

- (A) Damage to isolated homes.
- (B) Interruption of service for not more than one (1) day on any of the following:
 - (i) A county road, state two-lane highway, or U.S. highway serving as the only access to a community.
 - (ii) A multilane divided state or U.S. highway, including an interstate highway.
- (C) Interruption of service for not more than one (1) day on an operating railroad.

(D) Damage to important utilities where service would be interrupted for not more than one (1) day, but either of the following may occur:

- (i) Buried lines can be exposed by erosion.
- (ii) Towers, poles, and aboveground lines can be damaged by undermining or debris loading.

(3) If an uncontrolled release of the structure's contents due to a failure of the structure does not result in any of the items given in subdivision (1) or (2) and damage is limited to either farm buildings, agricultural land, or local roads, the dam shall be classified as low hazard.

(d) The division may modify an assignment of hazard classification, made previously under this article, if changes in the downstream development affect the potential for loss of human life and property. (*Natural Resources Commission; 312 IAC 10.5-3-1; filed Jan 26, 2007, 10:45 a.m.: 20070221-IR-312060092FRA*)

312 IAC 10.5-3-2 Reconsideration of hazard classification

Authority: IC 14-27-7.5-8

Affected: IC 14-27-7.5

Sec. 2. (a) This section establishes a process by which a dam owner or another affected person may request reconsideration of a determination of hazard classification made under section 1 of this rule.

(b) The dam owner or other affected person may submit any technical information or reports that were not previously available to the division.

(c) The dam owner's or other affected person's professional engineer may develop and submit a maximum breach inundation area and current damage evaluation assessing the downstream area affected by a dam breach.

(1) If the maximum breach inundation area and current damage evaluation predicts any of the following, the dam shall be classified as high hazard:

- (A) Flood depths greater than one (1) foot in any occupied quarters.
- (B) Loss of human life may occur.
- (C) Interruption of service for more than one (1) day on any of the following:
 - (i) A county road, state two-lane highway, or U.S. highway serving as the only access to a community.
 - (ii) A multilane divided state or U.S. highway, including an interstate highway.
- (D) Interruption of service for more than one (1) day on an operating railroad.
- (E) Damage to any occupied quarters where the flow velocity at the building compromises the integrity of the structure for human occupation.
- (F) Interruption of service to an interstate or intrastate, utility, power or communication line serving a town, community, or significant military and commercial facility, in which disruption of power and communication would adversely affect the economy, safety, and general well-being of the area for more than one (1) day.

(2) If the maximum breach inundation area and current damage evaluation predicts any of the following, the dam shall be classified as significant hazard:

- (A) Interruption of service for not more than one (1) day on any of the following:
 - (i) A county road, state two-lane highway, or U.S. highway serving as the only access to a community.
 - (ii) A multilane divided state or U.S. highway, including an interstate highway.
- (B) Interruption of service for not more than one (1) day on an operating railroad.
- (C) Damage to any occupied quarters that would not render the structure unusable.
- (D) Damage to important utilities where service would be interrupted for not more than one (1) day, but either of the following may occur:
 - (i) Buried lines can be exposed by erosion.
 - (ii) Towers, poles, and aboveground lines can be damaged by undermining or debris loading.

(3) If the maximum breach inundation area and current damage evaluation results predict none of the items in subdivision (1) or (2) and damage is limited to farm buildings, agricultural land, or local roads, the dam shall be classified as low hazard.

(*Natural Resources Commission; 312 IAC 10.5-3-2; filed Jan 26, 2007, 10:45 a.m.: 20070221-IR-312060092FRA*)

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