Alaska Dam Safety Program

HAZARD POTENTIAL CLASSIFICATION AND JURISDICTIONAL REVIEW

This form is used to review and indicate the hazard potential classification of an artificial barrier in accordance with 11 AAC 93.157 and to determine if the barrier is a dam under the jurisdiction of the Alaska dam safety regulations, based on the definition articulated under Alaska Statute 46.17.900 (3), and summarized as follows:

"Dam" includes an artificial barrier, and its appurtenant works, which may impound or divert water and which...

- has or will have an impounding capacity at maximum water storage elevation of 50 acre-feet and is at least 10 feet in height measured from the lowest point at either the upstream or downstream toe of the dam to the crest of the dam; or
- is at least 20 feet in height measured from the lowest point at either the upstream or downstream toe of the dam to the crest of the dam; or
- poses a threat to lives and property as determined by the department after an inspection.

In accordance with 11 AAC 93.151, an artificial barrier with a Class I or Class II designation is determined to meet the third definition of a dam, regardless of its geometry.

Please complete items 1 through 21. Attach additional information as necessary. This form must be certified and stamped on page 3 by an Alaska-registered professional engineer, qualified in accordance with 11 AAC 93.193.

1. Name of barrier: _____

   National Inventory of Dams (NID) number: _____ (Assigned by Department)

   Name of stream: _____

   General location and region: _____

   Legal location: Township _____ Range _____ Section _____ Meridian _____

   Purpose and type of barrier: _____

   This barrier is: ❑ Existing ❑ Proposed ❑ Under construction

   Current hazard potential classification: ❑ I ❑ II ❑ III ❑ Not assigned

2. Owner: _____

   Address: _____

   _____

   _____

   Contact name: _____

   Phone: _____

3. Is barrier federally owned, or regulated by the Federal Energy Regulatory Commission?

   ❑ Yes (stop here) ❑ No (complete form)

4. Maximum crest height of barrier: _____ feet
   Measured from: ❑ Upstream toe ❑ Downstream toe ❑ Offstream toe
   Basis of height: ❑ Conceptual design drawing ❑ Detailed design drawing
   ❑ As-built drawing ❑ Field measurement ❑ NID data

5. Maximum impoundment volume: _____ acre-feet
   Surface area of reservoir at maximum storage: _____ acres
   Average depth of reservoir above bottom of barrier: _____ feet (live storage)
   Basis of volume estimate:
   ❑ Surface area multiplied by average depth
   ❑ Bathymetry
   ❑ NID data
   ❑ Other: _____

6. Downstream development: ❑ Yes ❑ No ❑ Unknown
   Type of development (check all that apply):
   - ❑ Homes
   - ❑ School
   - ❑ Community halls, churches, etc.
   - ❑ Industrial or commercial property
   - ❑ Major highway
   - ❑ Primary roads
   - ❑ Secondary or rural roads
   - ❑ Railroads
   - ❑ Power or communication utilities
   - ❑ Water or wastewater treatment facilities or lines
   - ❑ Overnight campgrounds
   - ❑ Public parks or trails
   - ❑ Fish hatchery or processor
   - ❑ Barrier owner's property or facilities
   - ❑ Other utilities: _____
   - ❑ Other development: _____

   Basis of observations: ❑ Ground reconnaissance ❑ Aerial reconnaissance
   ❑ Aerial photo ❑ Other: _____
   Date of observations: _____

7. Proximity of development to downstream channel (add maps or other information as necessary):
   Distance downstream from barrier: _____
   Distance from stream bed: _____
   Relative elevation above streambed: _____

8. Is development in the inundation zone of a flood from an uncontrolled release of water from the barrier?
   ❑ Yes ❑ No ❑ Unknown

9. Was a dam break analysis conducted? ❑ Yes ❑ No
   Basis of determining inundation zone:
   ❑ Simplified DAMBRK model
   ❑ DAMBRK model
   (Please attach calculations)
   ❑ NWS FLDWAV model
   ❑ HEC-1 model
   ❑ Other: _____
   Maximum depth and velocity of flow through development: _____

10. Is development at risk from improper operation or a "sunny day" failure?
    ❑ Yes ❑ No ❑ Unknown

11. Is development at risk from an incremental increase in the flood if the barrier fails under flood conditions?
    ❑ Yes ❑ No ❑ Unknown
    Flood condition evaluated: ❑ 100 year ❑ ½ PMF ❑ PMF ❑ Other _____

12. Could an uncontrolled release cause other significant property damage or loss? ❑ Yes ❑ No ❑ Unknown
    Description: _____

13. Could an uncontrolled release effect public health? ❑ Yes ❑ No ❑ Unknown
    Description: _____

14. Is the reservoir created by the barrier the primary water supply for a community of more than 500 residents? ❑ Yes ❑ No ❑ Unknown

15. Is a backup water supply available? ❑ Yes ❑ No ❑ Unknown

16. Is barrier located on waters important to anadromous fish? ❑ Yes ❑ No ❑ Unknown

17. Are anadromous fish waters at risk of damage or loss if an uncontrolled release occurs? ❑ Yes ❑ No ❑ Unknown

18. Proposed hazard potential classification: ❑ Class I (High) ❑ Class II (Significant) ❑ Class III (Low)

19. Basis of classification:
    - ❑ Quantitative - Numerical dam break analysis conducted
    - ❑ Qualitative - Limited engineering calculations
    - ❑ Preliminary - No engineering calculations

20. Comments: _____

21. Certified by: _____ (Print name)

    Date: _____

    Company: _____

    Phone: _____

Engineer's Seal and Signature

Notes:

1. *This form must be certified and stamped by an Alaska-registered professional engineer qualified in accordance with 11 AAC 93.193.*
2. *The information presented in this form may be overruled based on current data that reveals a higher level of confidence in the quality of information necessary to make the appropriate determinations.*
3. *Anadromous fish waters are determined in accordance with 11 AAC 195.010 (a).*
4. *Alaska dam safety regulations are articulated under 11 AAC 93.151 through 11 AC 93.291 (Article 3).*

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Jurisdictional Status of Barrier:

❑ Dam under state jurisdiction

Reasons:
- ❑ Height
- ❑ Height and storage volume
- ❑ Hazard potential classification
- ❑ Anadromous fish stream
- ❑ Other:_____

❑ Barrier is not a dam under state jurisdiction

Reasons:
- ❑ Height
- ❑ Height and storage volume
- ❑ Hazard potential classification
- ❑ Federal ownership or regulation
- ❑ Other:_____

Concur with proposed hazard potential classification: ❑ Yes ❑ No

Hazard potential classification based on current information: ❑ Yes ❑ No

Official hazard potential classification:

❑ Class I (High) ❑ Class II (Significant) ❑ Class III (Low)

Comments:_____

Reviewed by: _____

Title: _____

Signature: _____

Date: _____