



# 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: City of Atka Water Source Impoundment Dam

National Inventory of Dams (NID) number: AK 00114 (Assigned by Department)

Name of stream: North stream

General location and region: City of Atka

Legal location: Township 92S Range 176W Section 16 Meridian Seward

Purpose and type of barrier: Water supply impoundment dam, concrete, to replace existing wooden structure.

This barrier is:  Existing  Proposed  Under construction

Current hazard potential classification:  I  II  III  Not assigned

2. Owner: City of Atka

Address: City of Atka, Julie Dirks, City Administrator

P.O. Box 765

Unalaska, AK 99685

Contact name: Julie Dirks, City Administrator

Phone: 907-581-6317

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: 3.5' at spillway, 7' top of dam  
 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: 0.05 acre-feet  
 Surface area of reservoir at maximum storage: 0.14 acres  
 Average depth of reservoir above bottom of barrier: 3.5 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  Power or communication utilities  
 School  Water or wastewater treatment facilities or lines  
 Community halls, churches, etc.  Overnight campgrounds  
 Industrial or commercial property  Public parks or trails  
 Major highway  Fish hatchery or processor  
 Primary roads  Barrier owner's property or facilities  
 Secondary or rural roads  Other utilities: \_\_\_\_\_  
 Railroads  Other development: \_\_\_\_\_
- Basis of observations:  Ground reconnaissance  Aerial reconnaissance  
 Aerial photo  Other: \_\_\_\_\_
- Date of observations: August, 2005
7. Proximity of development to downstream channel (add maps or other information as necessary):  
 Distance downstream from barrier: 2,900 feet  
 Distance from stream bed: 30 feet minimum  
 Relative elevation above streambed: Approx 10 feet
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

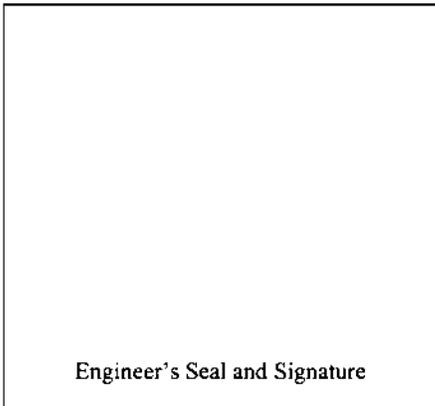
20. Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

21. Certified by: Todd Bethard (Print name)

Date: 4/17/06

Company: HDR Alaska, Inc.

Phone: 907-644-2000



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

Barrier is not a dam under state jurisdiction

Reasons:

- Height
- Height and storage volume
- Hazard potential classification
- Anadromous fish stream
- Other: \_\_\_\_\_

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: \_\_\_\_\_