

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S Webster Street
Madison WI 53703

Scott Walker, Governor
Daniel L. Meyer, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



Monday, April 17, 2018

Ms. Kathleen M Pierce, Clerk, Treasurer
Village of Friendship
PO Box 206
Friendship WI 54934
Expedited delivery via email: kpierce@maqs.net

Subject: Dam failure analysis conditional approval and hazard rating assignment for the Friendship Dam,
Field File #: 01.01, Key Sequence #: 62, Adams County.

Dear Ms. Pierce,

We are sending you this approval of the dam failure analysis and setting the hazard rating for the Friendship Dam. The hazard rating is being set as High Hazard due to the lack of adequate floodplain zoning within the dam failure floodplain (hydraulic shadow) downstream of the dam. The hazard rating that is possible, once the required zoning is adopted, is Significant Hazard due to the presence of critical infrastructure in the Friendship Dam hydraulic shadow that may be inundated and potentially fail in the event of the dam failure.

As a result of the study the Village of Friendship and Adams County will have to adopt hydraulic shadow zoning downstream of the dam. The hydraulic shadow inundation area identified in the study must also be used in the development of the Emergency Action Plan (EAP) for your dam. Joe R. Behlen, P. E. in our Wisconsin Rapids office will be assisting you in the adoption process and the development of the EAP.

As a dam having an assigned High Hazard rating, the Friendship Dam must be capable of passing the 1000-year flood without overtopping. In its current configuration the Friendship Dam does not have sufficient capacity to safely pass a 1000-year flood without overtopping through its spillways as defined by NR 333, for a High Hazard dam.

Once the hydraulic shadow has been adopted, you can request, in writing, that we lower the hazard rating from High to Significant. The Friendship Dam as currently configured is not able to safely pass the 500-year flood without overtopping through its spillways as defined by NR 333, for a Significant Hazard dam.

If you have questions about this approval, please give me a call at 608-266-1925. If you have other questions pertaining to the operation and maintenance of your dam please contact Joe R. Behlen, P. E. at 715-421-9940, or via email at joseph.behlen@wisconsin.gov.

Thank you for your continued cooperation.

Sincerely,

A handwritten signature in black ink, appearing to read 'Konny E. Margovsky'.

Konny E. Margovsky, P. E.
Dam Safety / Floodplain Engineer
Wisconsin Department of Natural Resources
Bureau of Watershed Management

Copy to: Joe R. Behlen, P. E. - Wisconsin Rapids office via email
AYRES Associates, Inc. - via email

**BEFORE THE
DEPARTMENT OF NATURAL RESOURCES**

IN THE MATTER of the conditional approval of dam failure analysis and the assignment of the Hazard Rating for the Friendship Dam, located across the Little Roche A Cri Creek, in Adams County. Field File #: 01.01

FINDINGS OF FACT

1. The Department of Natural Resources (Department) has examined the dam failure analysis, for the Friendship Dam, across Little Roche A Cri Creek, in the SW 1/4 of the NW 1/4 of Section 05, Township 17N, Range 06E, Adams County, Wisconsin.
2. The Friendship Dam is owned and operated by the Village of Friendship.
3. The dam failure analysis was performed by AYRES Associates, Inc. and the final version submitted to the Department on April 05, 2018.
4. AYRES Associates, Inc. has determined that a rating of High Hazard would be appropriate for the dam and the area downstream of the dam.
5. There is critical infrastructure within the dam failure floodplain (hydraulic shadow) downstream of the dam that may be inundated and potentially fail in the event of the dam failure.
6. The current Flood Insurance Study (FIS) zoning in place downstream from the Friendship Dam is not adequate in providing sufficient protection of life, health and property.
7. In its current configuration the Friendship Dam does not have sufficient capacity to safely pass a 1000-year flood without overtopping through its spillways as defined by NR 333, for a High Hazard dam.
8. The hydraulic shadow resulted from the dam failure analysis of the Friendship Dam was calculated based on assumed operation of the dam tainter gate. At present the Department does not have an approved Inspection, Operation and Maintenance Plan (IOM) on file to support this assumption.
9. The analysis was performed in compliance with Wisconsin Administrative Codes NR 333, and NR 116.
10. The hazard rating meets the standards of Section NR 333.06, Wisconsin Administrative Code.

CONCLUSIONS OF LAW

1. The review has been conducted in accordance with Chapter 31, Wisconsin Statutes, and Chapters NR 333 and NR 116, Wisconsin Administrative Codes.
2. The Department has authority under Chapter 31, Wisconsin Statutes, and Chapter NR 333, Wisconsin Administrative Code, to assign a hazard rating.

CONDITIONAL APPROVAL AND ASSIGNMENT OF THE HAZARD RATING

1. The hazard rating of High Hazard is hereby assigned to the dam.
2. The Friendship Dam failure analysis is hereby conditionally approved pending submittal and approval by this Department of the required Inspection, Operation and Maintenance Plan.

3. By June 1, 2018 you must develop and provide the following documents to Joe R. Behlen, P. E. in our Wisconsin Rapids office:

- 1) 3 copies of the hereby approved study narrative report,
- 2) an Inspection, Operation and Maintenance Plan (IOM),
- 3) an Emergency Action Plan (EAP) based on the approved dam failure analysis

Relevant information of the approved analysis including: a) hydraulic shadow profile, b) dam failure floodway data table, and c) hydraulic shadow map will then be sent to the Village of Friendship and Adams County by Joe R. Behlen, P. E. with the official letter requesting to adopt the study into the floodplain zoning ordinance.

4. The dam must be upgraded to pass the required flows within 10 years of the date of this approval letter.

NOTICE OF APPEAL RIGHTS

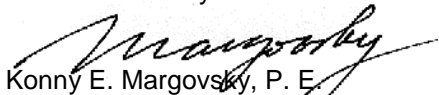
If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to sections 227.52 and 227.53, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to section 227.42, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with section NR 2.05(5), Wis. Adm. Code, and served on the Secretary in accordance with section NR 2.03, Wis. Adm. Code. The filing of a request for a contested case hearing does not extend the 30-day period for filing a petition for judicial review.

This Decision was emailed on April 17, 2018

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES

For the Secretary



Konny E. Margovsky, P. E.
Dam Safety / Floodplain Engineer
Wisconsin Department of Natural Resources
Bureau of Watershed Management