



October 5, 2020

Mr. Joe Pintarro  
President, Spirit Lake Improvement Association  
4423 Eagle Ridge Lane  
Windsor, WI 53598

Subject: Dam Safety Inspection Report for the Spirit Lake Dam, Field File 50.23, KSN1438, Price County, Wisconsin.

Dear Mr. Pintarro:

This is the Department of Natural Resources (DNR) Dam Safety Report based on the inspection of the Spirit Lake Dam located in the SE ¼ of the SE ¼ of Township 34 North, Range 3 East, Section 32, Price County, Wisconsin. This dam was inspected on September 25, 2020.

At the request of the Spirit Lake Improvement Association the Department was asked to meet at the dam with members of the Lake Association and County Board to look at the dam and address some of the concerns these members had about the condition of the dam.

The Spirit Lake Dam is a small, low hazard dam located on the outlet of Spirit Lake which flows into the Spirit River. This dam creates a 340-acre impoundment in a drainage basin of approximately 14.2 square miles. The dam has a structural height of 5.8-feet with a maximum storage capacity of approximately 2000 acre-feet of water. The Spirit Lake Dam is a concrete weir structure roughly 42 ft. in length with a 9-inch deep trapezoidal low flow weir located in the center of the structure.

## 1. PRINCIPAL SPILLWAY

The principal spillway for the Spirit Lake Dam is a 42-ft. long concrete weir structure with a 9-inch-deep trapezoidal low flow weir section. The concrete portion of the dam is in good condition considering its age. Some of the concrete matrix has weathered away leaving exposed aggregate. While it is not a problem at this time; the association should consider having the dam resurfaced at some time in the future. No significant cracks in the concrete were observed and the dam appeared to be functioning as designed.

The design of this dam is such that the crest of the dam is slightly concave, and water was observed to be flowing over the center portion of the dam as would be expected. Some repair work to the dam was performed in the late 1990's with consisted of rip rap placement along the lake channel leading to the dam and the downstream outlet channel. The rip rap was underlain with a geotextile fabric and appears to be in good condition and functioning properly.

I am enclosing a set of plans for the dam from the 1998 repair project. You should keep these plans with the other documents which you have regarding the Spirit Lake Dam.

This inspection report contains a sufficiency rating based on Departmental guidance dated September 18, 2012. The rating is only intended to reflect the Department's interpretation of the physical conditions on the day of the inspection outlined in this report. The rating is not required by State Statute and does not imply any regulatory significance. The rating is not a Departmental certification of the overall safety, structural adequacy, hydraulic capacity or operation of the dam during any loading conditions. Departmental staff has been requested to assign sufficiency ratings to be in compliance with Federal grant requirements for the State Dam Safety Program. The Spirit Lake Dam has a sufficiency rating of fair. If you have any questions concerning this report or the operation and maintenance of your dam, please contact me at your convenience.

Sincerely,

Mark Stephenson, PE  
Dam Safety Engineer  
Black River Falls Service Center  
(715) 284-1418

Copy to:

Tanya Lourigan, PE, State Dam Safety Engineer, WT/3