



US Army Corps
of Engineers
St. Paul District

Information Paper

Tolna Coulee, North Dakota



The control structure will limit flows through Tolna Coulee by adjusting the top elevation of a series of stop logs.

Contact

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Location/Description

Tolna Coulee is located on the southwest corner of Stump Lake in Nelson County, North Dakota. Devils Lake started flowing into Stump Lake in 1999, filling Stump Lake, creating one lake with a combined surface area of almost 300 square miles. If Devils Lake continues to rise, it will naturally flow through Tolna Coulee to the Sheyenne River. The current elevation of Devils Lake as of September 4, 2012, is approximately 1452.0 feet above mean sea level; it would flow through Tolna Coulee if it reached elevation 1458.

Purpose

The Tolna Coulee Advance Measures project would prevent a catastrophic flow of water through Tolna Coulee, while also allowing for the gradual lowering of Devils Lake if natural erosion occurs.

Background

The continued rise of Devils Lake has increased the potential for a catastrophic overflow of Devils Lake through Tolna Coulee. If a large inflow to the lake occurred, significant erosion could occur at Tolna Coulee resulting in major flows. With erosion, the estimated maximum outflow would be 14,000 cubic feet per second, and the outflow would be above 12,000 cubic feet per second for 19 consecutive days. Flows of this magnitude would result in catastrophic flooding in Valley City, North Dakota (roughly equivalent to a 500-year flood), and other downstream communities. The control structure would limit those flows to 3,000 cubic feet per second.

Status

A Project Information Report (PIR) was completed in March 2011 to document the actions required to prevent the catastrophic overflow of Tolna Coulee. It was prepared in response to a letter received from the governor of North Dakota on January 13, 2011, requesting Corps assistance. That report identified a sheet-pile sill as the least cost alternative for preventing catastrophic outflows through Tolna Coulee. The State of North Dakota requested that a stoplog control structure be constructed with the sheet-pile sill; the State bears the additional cost for the control structure. This project was completed in May 2012.

Authority

Public Law 84-99, Advance Measures

Fiscal

The total project cost is \$8,980,000. The total Federal cost is \$5,530,000, and the total non-Federal cost is \$3,450,000. The project sponsor is the North Dakota State Water Commission, which entered into a Project Partnership Agreement on September 9, 2011.