

# TOSTON DAM (Broadwater-Missouri)

## Fact Sheet

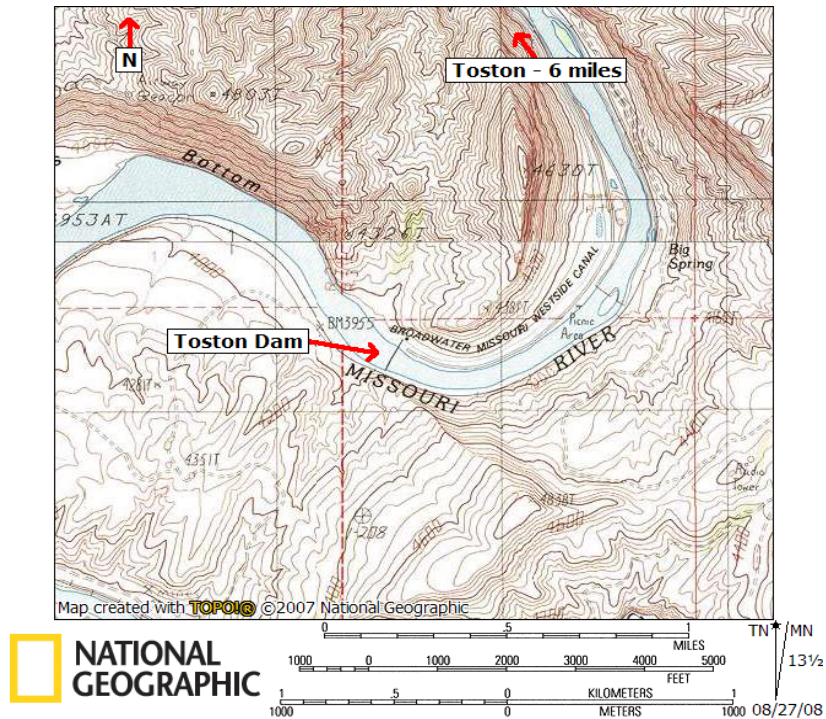
### PROJECT DESCRIPTION

- ◆ Located on the Missouri River in Broadwater County, 6 miles upstream of Toston, MT
- ◆ Dam construction completed in 1940
- ◆ Hydropower facility completed in 1989
- ◆ Owned by DNRC & operated by SWPB
- ◆ Project consists of:
  - Concrete gravity dam, 51.5 feet high, 630 feet long
  - Run-of-the-river dam, 7 bays with rubber inflatable bladder flashboards
  - A 10 megawatt generator
  - A three-mile long electric transmission line
- ◆ NorthWestern Energy purchases power from the plant. Hydropower revenue, after operating expenses, is used for rehabilitation and repairs on other state-owned projects.
- ◆ Impounds 2,400 acre-feet at normal full pool, covering 275 surface acres (2018 Survey)



### WATER USE

- ◆ Provides irrigation water through 300 contracts for 42,000 acre-feet, delivered to users through the Broadwater-Missouri Canal System.



## CONSTRUCTION SUMMARY

- ◆ Hydropower was added to the existing dam in 1989. This included construction of new rubber bladder gates to control pool levels, installation of a 10-megawatt hydropower plant, and improvements to access and maintenance roads. Project cost (1989): \$26,000,000
- ◆ A new automated trash rake was installed in 2002. The trash rake cleans debris from the intake grates of the powerhouse for greater efficiency and less power loss. Project cost: \$450,000
- ◆ The bridge over the spillway was replaced in 2005 at a cost of \$675,000. The bridge serves as a primary maintenance access and provides public access to the east side of the river.
- ◆ The operation and maintenance staff completed replacement of two major components of the turbine shaft's mechanical seal in August 2009. Project cost: \$95,000
- ◆ One of the spillway rubber bladders failed in 2012, resulting in a decrease of reservoir levels (no resulting property damage or injuries). Subsequently, all seven bladders were replaced in 2014, as they had reached the end of their useable life span. Project cost: \$2,149,970



Rubber Bladder Replacement, July 2014