

MIDDLE CREEK DAM (HYALITE)

Fact Sheet

PROJECT DESCRIPTION

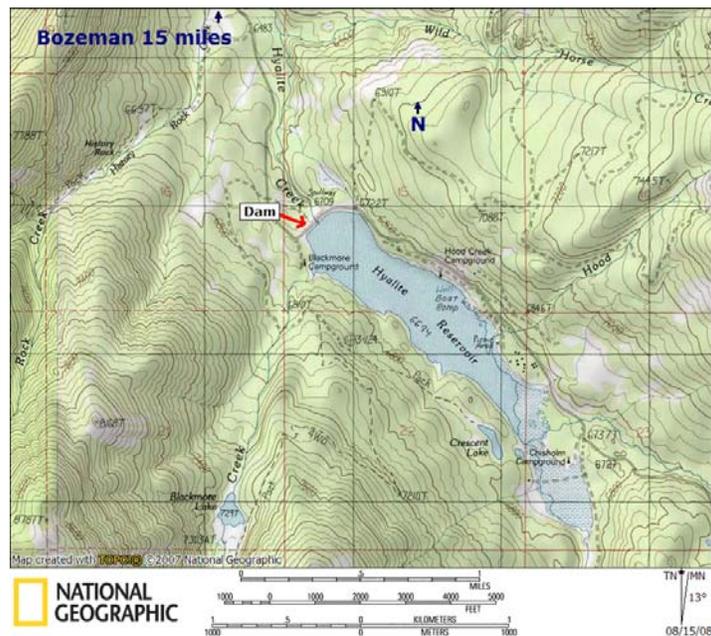
- ◆ Located on Middle Creek in Gallatin County, 15 miles south of Bozeman
- ◆ Construction completed in 1951
- ◆ Owned by DNRC & managed by SWPB under a U.S. Forest Service Special Use Permit.
- ◆ Operated by Middle Creek Water Users Association since 1951

- ◆ Project consists of:
 - Earthen dam with mechanically-stabilized earth crest, 125 ft. high & 1,900 ft. long
 - 5-foot diameter, cast in place steel-lined concrete conduit
 - One 54-inch diameter butterfly operating gate and one 54-inch slide guard gate; operated from a tower on the dam crest
 - The principal spillway has a single cycle labyrinth crest inlet and two baffled apron type spillway chutes
 - The auxiliary spillway is earthen with a 530 foot long concrete crest
- ◆ Reservoir stores 10,184 acre-feet at normal full pool, covering 490 surface acres.
- ◆ The dam is a “high hazard” structure, which means that its failure could cause loss of life. Farms and ranches, homes, schools, roads, bridges and utilities are in the flood plain.



WATER USE

- ◆ Provides irrigation water for 73 farms and ranches and drinking water for 2,000 households (1/3 of the City of Bozeman water supply is provided by the project) through 109 contracts for 10,184 acre-feet of water
- ◆ Reservoir is also used for water-based recreation



REHABILITATION SUMMARY

- ◆ The dam embankment was raised 8 feet in 1991-1992 as part of a major rehabilitation that included a new spillway, and seepage control measures. Subsequently, the reservoir storage capacity was increased 1,917 acre-feet. Project cost (1992 Dollars): \$5,200,000
- ◆ An automated instrumentation system was installed in the fall of 2008. The new system improved seepage, drain flow, and reservoir monitoring. Project cost: \$122,430
- ◆ Gallatin County funded and installed an early warning system in 2010.

FUTURE NEEDS

The project was rehabilitated in 1991-1992 and meets or exceeds current dam safety standards. No deficiencies currently exist.



Downstream face and outlet

Upper spillway baffled drop



Lower spillway baffled drop