

YELLOW WATER DAM

Fact Sheet

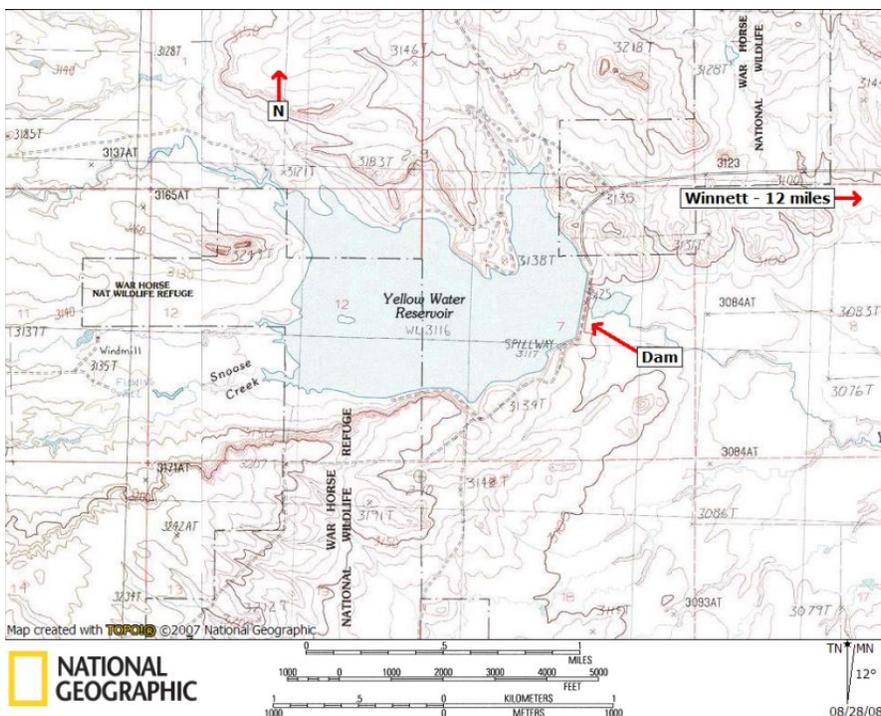
PROJECT DESCRIPTION

- ◆ Impounds Yellow Water Creek, located in Petroleum County, 12 miles southwest of Winnett
- ◆ Constructed in 1938
- ◆ Owned by DNRC & managed by SWPB
- ◆ Operated by the Yellow Water Water Users Association since 1938
- ◆ Project consists of:
 - 37 foot-high, 1,695 foot-long, earthfill dam.
 - Uncontrolled trapezoidal earth and rock spillway
 - 42-inch reinforced concrete pipe outlet, 150 foot-long
 - One 42-inch slide gate with manual operator
- ◆ Storage at full pool is 3,842 acre-feet, covering 490 surface acres
- ◆ The dam is a “high hazard” structure which means that its failure could cause loss of life. Farms, ranches, numerous homes, roads, bridges, and utilities are located in the flood plain.



WATER USE

- ◆ The Yellow Water Water Users Association has 4 contracts for 2,000 acre-feet of water.
- ◆ The west and south shores of the reservoir are part of the War Horse National Wildlife Refuge, managed by the U.S. Fish and Wildlife Service. The reservoir serves as an important nesting area for waterfowl.



REHABILITATION SUMMARY

- ◆ In 1979, the original spillway was eroding and threatened the embankment. A new spillway was configured running parallel to the embankment using the original spillway entrance.
- ◆ Yellow Water Dam underwent a two phase rehabilitation project in 1985. Phase I included the embankment excavation and removal of the original outlet conduit. Phase II included the construction of a new outlet conduit (42-inch diameter reinforced concrete pipe), inlet and outlet structures, cleaning the original gate and placing riprap on a portion of the upstream face.
- ◆ High water levels, wind and flooding in 2011 damaged the riprap along the upstream face of the dam. The damaged riprap was replaced in 2012. Periodic minor riprap repairs have been conducted in subsequent years.

FUTURE NEEDS

- ◆ The intake structure has a history of plugging with sediment when the gate is closed during the off season. The intake structure may need to be modified or redesigned to prevent plugging.
- ◆ The existing spillway capacity may not meet current safety standards. Further analysis is needed and future modification may be required.

Estimated Cost of the above repairs: \$500,000



Outlet and downstream face of dam



Dam Crest



Downstream face