

Lake Conservation Notes

Northeast Glacial Lakes Watershed Project
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Blue Dog Lake Levels 1934 to 2009

Prior to 1981, Blue Dog Lake had a variable elevation control structure that was built in 1944. This structure allowed the lake elevation to vary between 1799.6 to 1800.35 feet above mean seal level (msl). This structure was replaced with a fixed elevation outlet structure in 1981. The current outlet elevation is set at 1799.93. Blue Dog Lake's Ordinary High Water Mark is 1800.7. The OHWM is determined by shoreline characteristics such as slope, soil, and shoreline vegetation. Over the past fifty years and prior to the construction of the fixed elevation outlet, the lake had undergone several increases in outlet elevation in an attempt to increase the lakes depth. However, by increasing lake elevation increased sedimentation occurred as the new shoreline became established through erosion. This short term solution to increase lake depth actually had detrimental effects over the long term as the lake lost depth to sedimentation. In 1999, the lake reached it's highest recorded level of 1804.29 following several years of above normal precipitation. This elevation was over four feet higher than the outlet elevation causing damage to lake shore property and further shoreline erosion. Listed below are lake levels beginning in August 1934.

Aug 1934	1782.2	Sept 1946	1784.7	May 1964	1787.3
June 1935	1782.6	May 1947	1785.1	Oct 1964	1787.4
Oct 1935	1781.3 *	May 1948	1784.9	May 1966	1787.8
May 1936	1782.5	May 1949	1784.8	Nov 1966	1787.3
Nov 1936	1781.6	Nov 1949	1786.4	May 1967	1787.8
May 1937	1786.3	May 1950	1787.5	May 1968	1787.7
Oct 1937	1784.2	Jan 1951	1787.0	Nov 1968	1787.3
June 1938	1785.0	May 1951	1787.5	May 1969	1787.3
Oct 1938	1784.2	Feb 1952	1787.2	Sept 1969	1786.6
May 1939	1784.8	Oct 1952	1786.6	May 1970	1788.0
Nov 1939	1783.9	Nov 1953	1786.4	Dec 1970	1787.1
May 1940	1785.4	Apr 1954	1788.5	Nov 1976	1785.3
Oct 1940	1784.4	Sept 1954	1786.6	May 1980	1800.1
June 1941	1784.8	May 1955	1787.3	Nov 1980	1799.5
Nov 1941	1784.0	May 1956	1787.4	Apr 1981	1800.2
May 1942	1784.1	Nov 1956	1786.8	May 1983	1800.2
Nov 1942	1785.2	Sept 1956	1786.9	Oct 1983	1799.7
June 1943	1784.9	Apr 1959	1787.1	June 1984	1800.3
Nov 1943	1784.8	Apr 1960	1788.2	Aug 1984	1800.2
July 1944	1784.8	June 1961	1787.4	May 1985	1800.3
Nov 1944	1784.4	Dec 1961	1786.7	Oct 1985	1800.3
May 1945	1784.9	June 1962	1787.9	May 1986	1800.7
Oct 1945	1783.7	Dec 1962	1787.3	Sept 1986	1800.8
May 1946	1785.9	May 1963	1787.5	Apr 1987	1800.6

Oct 1987	1800.0	May 1995	1800.8	May 2002	1801.59
Apr 1988	1800.2	Oct 1995	1800.5	Oct 2002	1800.33
Sept 1988	1799.2	May 1996	1800.7	April 2003	1800.4
Apr 1989	1800.2	Sept 1996	1800.0	Sept 2003	1799.9
Oct 1989	1799.8	April 7 1997	1802.3	May 2004	1799.93
May 1990	1800.0	Oct 1997	1800.5	Sept 2004	1799.9
Sept 1990	1799.7	Mar 1998	1800.9	May 2005	1800.0
May 1991	1800.3	April 1998	1802.0	Sept 2005	1799.8
Oct 1991	1800.1	May 1998	1802.9	April 2006	1800.2
Apr 1992	1800.3	Sept 1998	1802.5	Sept 2006	1799.8
Sept 1992	1800.0	June 1999	1804.29**	May 2007	1801.3
May 1993	1800.3	May 2000	1802.84	Oct 2007	1800.3
Sept 1993	1800.5	Nov 2000	1801.32	May 2008	1801.05
May 1994	1800.7	June 2001	1803.05	October 2008	1800.6
Sept 1994	1800.2	Oct 2001	1801.53	April 2009	1802.4
				September 2009	1801.35

* Lowest recorded elevation: Oct 1935 - 1781.3

**Highest recorded elevation: June 10, 1999 - 1804.29

Outlet Elevation: 1799.93

Lake elevations are taken every spring and fall by the Water Rights Division of the SD Dept. of Environment and Natural Resources.