

City of Williams

Water and Wastewater Systems

Chronology

- 1881 Post office established; Williams founded.
- 1882 Railroad constructed.
- 1887 Santa Fe Dam constructed – Reservoir capacity 3 million gallons.
- 1888 Townsite surveyed by Railroad.
- 1892 Raised Santa Fe Dam – Reservoir capacity 42 million gallons.
- 1893 Upper Saginaw Dam constructed – Reservoir capacity 17 million gallons.
- 1896 Phelan Dam constructed north of town – Reservoir capacity 6 million gallons.
- 1901 Town of Williams incorporated on July 9.
- 1901 Santa Fe Dam raised using stone hauled on railroad from Holbrook - Reservoir capacity 70 million gallons.
- 1902 Caufman Dam (City Dam) constructed reservoir capacity 10 million gallons.
- 1904 Lower Saginaw Dam constructed to catch leakage from Caufman Dam (City Dan) and upper Saginaw Dam.
- 1909 Pipeline installed from City Dam (Caufman) to town; additional water mains laid and fire hydrants installed.
- 1916 City Dam raised 8 feet; Reservoir capacity 30 million gallons.

- 1917 \$55,000 worth of water bonds authorized.
- 1918 Town of Williams purchased Williams Water Company; including dams, reservoirs, pipeline distribution system, hydrants and meters for \$35,000.
- 1924 City Dam improved reservoir capacity 36 million gallons.
- 1927 Leak in City Dam repaired.
- 1928 Phelan Dam (Cureton) reconstructed north of town.
- 1929-30 Santa Fe drilled 4 wells on station grounds – no water found - deepest hole 1020 feet.
- 1935 Dogtown Dam constructed reservoir capacity 360 million gallons.
- 1937 Sewer system (Collection Lines) and sewage plant constructed.
- 1940 Water Treatment Plant constructed – Plant capacity 400,000 gallons per day (0.400 mgd).
- 1942 Saginaw and Manistee Lumber Mill closed.
- 1942 Santa Fe Dam added concrete section from downstream toe to elevation 6850, as first phase in raising dam. Installed two 8” outlets in 4’X6’ tunnel at elevation 6830.
- 1944 Williams purchased Saginaw Dams
Upper Saginaw capacity 17 million gallons; Lower Saginaw capacity 3.5 million gallons.
- 1946 Settling basin and filter added to Water Plant – Plant capacity 800,000 per day (0.800).
- 1948 Cataract Dam constructed - Reservoir capacity 109 million gallons.
- 1948 South sewage lagoon constructed
- 1953 Kaibab Dam constructed - Reservoir capacity 293 million gallons.

- 1955 North sewage lagoon constructed; old Sewage Treatment Plant abandoned in 1953.
- 1956 Storage Tank constructed - Treated water storage increased by 200,000 gallons.
- 1957 Report - Underground water supply for City of Williams, Turner and Associates.
- 1963 Report - Groundwater hydrological study; Deep Aquifers, Heinrich J. Thiele.
- 1963 Gonzales Well west of Williams drilled to 2,500' – dry.
- 1963 Report – Water supply of Williams's area, USGS; JP Akers and BW Thomsen.
- 1964 Report – Groundwater hydrological study; shallow aquifers within 3 mile radius, Heinrich J. Thiele.
- 1968 Cataract Dam raised 2' - Reservoir capacity 135 million gallons.
- 1969 Report – Surface Water Supply for Williams, USGS, Bert W. Thomsen.
- 1969/70 Dogtown Lake lined; Kaibab Lake lined with intake tower installed.
- 1971 Report – Water/Sewer Study, Carollo Engineering.
- 1973 Installed 750,000 gallon storage tank on 3rd Street and 12" water main from tank to Edison Ave.
- 1974 Water Plant Upgrades – underdrains for filters, bigger aeration basin and increase capacity in Storage Tank # 2.
- 1985 Report – Gonzales Lake Study.

- 1990 Shallow Well Program – 8 wells were drilled 880’ around Williams, all dry.
- 1990 Plate Settlers were installed at Water Plant to increase the detention time in sediment basin.
- 1992 Report – Study on Cougar, Frog and Pinon Lakes, USFS. SRP protested and project died.
- 1992 10,000 gallon liquid alum tank installed at Water Plant.
- 1993 Sludge dewatering pond (filterbackwash) constructed for Water Plant.
- 1993/94 Inflow & Infiltration Analysis – Smoke testing, manhole surveys and video collection lines.
- 1994 1 million gallon storage tank added to Cinder Hill and 12” water main for development to the west (Highland Meadows) by Golf Course.
- 1994 Report – Wetlands Study, CH2M Hill.
- 1995 Upgrades to Cataract and Kaibab Pumphouses – pumps and control panels.
- 1996 New stainless steel screens installed at Dogtown Lake; Plate Settlers removed from Water Plant.
- 1996/97 Santa Fe Lake Project – Replace screens, valves, piping and remove silt.
- 1997 \$5 million bond approved for Inflow and Infiltration Project.
- 1997/01 Inflow and Infiltration Project – City replaces 60% of its collection (sewer) lines. Project broken into 8 Phases and completed in 5 years.
- 1998 Report – North Central Water Study (Lake Powell water line).

- 1998 Reuse line installed from Wastewater Plant to Golf Course; Cost \$943,723.
- 1998 Deep Well Program begins
City drills 1st well at Bard Springs 6 miles west of town – dry.
- 1999 Santa Fe Well # 1 – drilled below Santa Fe Dam, tools stuck at 1,100’ abandoned.
- 1999 Santa Fe Well # 1A – drilled east of dam just off 4th Street; well drilled to 990’ and produces 40 gallons per minute.
- 2000 Dogtown Well # 1 – Drilled east of Dogtown Lake; well drilled to 3,500’ and produces 250 gallons per minute.
- 2000 Dogtown Well # 2 – Drilled south of Dogtown Well # 1; drilled to 4,000’ – Dry.
- 2001 Rodeo Well – Drilled at Rodeo grounds; well drilled to 3,622’ and produces 200 gallons per minute. Water quality is very poor.
- 2001 Constructed 2 parallel 4” water lines from Dogtown Well # 1 to Dogtown Lake line.
- 2002 50’X100’ Storage building constructed at Water Plant, old Quonset huts removed.
- 2002 Report – Preliminary Engineering Design for Water Plant Expansion. Enhanced Coagulation was selected to comply with DBPR and remove TOC in supply water.
- 2003 Dogtown Well # 3 – Drilled South East of Dogtown Well # 1; and East of Dogtown Well # 2; drilled to 3,655’ and produces 400+ gallons per minute.
- 2003 Cost to date for Well Exploration Program \$8,252,146.
- 2003 Reports – Alternative Analysis Study, Disinfection Profiling, Treatment Technique Compliance, Source Water Assessment.

- 2004 Water Treatment Plant Expansion Project – Plant capacity 1.5 million gallons per day; expandable up to 2 million gallons per day. Larger aeration basin, 3rd sediment basin, new chemicals & tanks, air scour system for filters, backwash pumps and building, new underdrains/media for filters and a 3rd filter installed. Cost \$4,020,834.
- 2004 Report – Preliminary Engineering Design for new Wastewater Plant. City chooses Oxidation Ditch and will use Design/Build approach.
- 2004 Installed 8” water line from Dogtown Well # 3 to Dogtown Well # 1.
- 2006 City Dam Modifications – Parapet wall removed and increased size of spillway.
- 2007 New Wastewater Treatment Plant; Oxidation Ditch - Plant capacity 990,000 gallons per day; expandable to 2 MGD – Cost \$13,570,000.
- 2008 New Wastewater Plant put on line June 26.
- 2008 Radio Read Water meters installed.
- 2009 Water Model of Distribution System completed.
- 2009 6th Street Drainage Project – Diverts storm water south of town into Santa Fe Wash. This prevents flooding downtown.
- 2009 SCADA System installed on Storage Tanks and Wells.
- 2010 Constructed Williams Wastewater Treatment Plant Laboratory obtained State certification.