

Chronology of Water Facilities

Year/Month	Items relating to Waterworks Facilities	Water supply capacity
1892 August	Waterworks construction project started	
1893 July	Water distribution reservoir in Osaka Castle completed	
1895 November	Waterworks construction project completed, birth of Sakuranomiya water resource	51,240 m ³ /day
1897	Commencement of first waterworks expansion project	
1908 January	Commencement of second waterworks expansion project and meter installation project	
1910 March	Meter installation project completed	
1912	First waterworks expansion project completed	67,200-91,650 m ³ /day
1914 March	Second waterworks expansion project completed, birth of Kunijima water resource	219,000 m ³ /day
1915 September	Suspension of operations at Sakuranomiya water resource	
1918 June	Commencement of Kunijima water resource equipment supplementation project	
1919 March	Kunijima water resource equipment supplementation project completed	243,000 m ³ /day
September	Commencement of third waterworks expansion project	
1920 December	Abolition of Sakuranomiya water resource	
1922 March	Third waterworks expansion project completed	379,000 m ³ /day
1925 August	Commencement of fourth waterworks expansion project	
1926 November	Commencement of water distribution pipe construction project	
1928 March	Water distribution pipe construction project completed	
1929 April	Commencement of highland water distribution equipment improvement project	
1930 February	Fourth waterworks expansion project completed	577,000 m ³ /day
October	Commencement of water distribution pipe expansion project	
1931 May	Highland water distribution equipment improvement project completed	
1932 March	Water distribution pipe expansion project completed	
1933 November	Commencement of fifth waterworks expansion project	
1935 November	Waterworks office building completed (operation launched on December 1)	
1939 May	Commencement of water supply equipment expansion and improvement project	
1940 April	Commencement of sixth waterworks expansion project	
June	Fifth waterworks expansion project completed	862,000 m ³ /day
1946 March	Water supply equipment expansion and improvement project abandoned	
March	Sixth waterworks expansion project abandoned	
1948 September	Water supply equipment expansion and improvement project restarted	
1949 April	Water quality testing laboratory constructed	
1953 April	Commencement of water distribution pipe improvement project	
June	Sixth waterworks expansion project restarted	
1954 August	Water supply equipment expansion and improvement project completed	982,000 m ³ /day
1957 November	Birth of Niwakubo water purification plant (sixth expansion project), partial passing water initiated (120,000 m ³ /day)	1,102,000 m ³ /day
1958 July	Niwakubo water purification plant completed (sixth expansion project)	1,222,000 m ³ /day
	Full passing water transmission of 240,000 m ³ /day	
	Commencement of seventh waterworks expansion project	
1960 March	Sixth waterworks expansion project completed	
1961 April	Separation and independence of industrial waterworks operations from waterworks operations	
July	Partial passing water from Niwakubo water purification plant (seventh expansion project) (120,000 m ³ /day)	1,342,000 m ³ /day
1962 April	Commencement of eighth waterworks expansion project	1,462,000 m ³ /day
July	Niwakubo water purification plant completed (seventh expansion project)	
	Full passing water of 240,000 m ³ /day	
1964 March	Seventh waterworks expansion project completed	1,562,000 m ³ /day
July	Niwakubo water purification plant expanded (eighth expansion project), partial passing water (100,000 m ³ /day) launched	
1965 April	Commencement of 5-year plan water distribution construction project (Phase 1)	1,662,000 m ³ /day

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July	Niwakubo water purification plant expanded (eighth expansion project), partial passing water launched (100,000 m ³ /day)	1,782,000 m ³ /day
	Commencement of 5-year plan water distribution construction project (Phase 1)	
1966 July	Niwakubo water purification plant expanded (eighth expansion project), partial passing water launched (100,000 m ³ /day)	
	Niwakubo water purification plant expansion (eighth expansion project) completed (120,000 m ³ /day)	
	Full passing water of 320,000 m ³ /day	1,982,000 m ³ /day
1968 July	Toyono water purification plant expanded (eighth expansion project), partial passing water launched (200,000 m ³ /day)	2,182,000 m ³ /day
1969 September	Toyono water purification plant (eighth expansion project) completed (200,000m ³ /day)	
	Full passing water of 400,000 m ³ /day	
September	Commencement of ninth waterworks expansion project	
1970 July	Toyono water purification plant (ninth development project) partially completed (50,000 m ³ /day)	2,232,000 m ³ /day
1972 April	Phase 2 water distribution construction project implemented	
July	Kunijima water purification plant (ninth expansion project) completed (Fourth System, 108,000 m ³ /day)	2,340,000 m ³ /day
1973 July	Kunijima water purification plant (ninth expansion project) completed (Third System 3, 90,800 m ³ /day)	2,430,000 m ³ /day
1975 August	Ninth waterworks expansion project suspended	
	Implementation continued as special construction project for remaining work	
1979 March	Special construction project completed	
April	Phase 1 water purification facilities construction project implemented	
1982 April	Phase 3 water distribution pipe construction project implemented	
1990 April	Phase 4 water distribution pipe construction project implemented	
1992 April	Phase 2 water purification facilities construction project implemented	
	Advanced water purification facilities construction project implemented	
1995 November	100th anniversary of passing water (construction of waterworks memorial hall etc.)	
1997 April	Phase 3 water purification facilities construction project implemented	
	Phase 5 water distribution pipe construction project implemented	
1998 March	Kunijima water purification plant lower system advanced water purification passing water	
1999 March	Niwakubo water purification plant advanced water purification passing water	
2000 March	Kunijima water purification plant upper system advanced water purification water transmission	
	Toyono water purification plant advanced water purification passing water	
2006 November	International water quality control standards for all water purification plants	
	ISO9001 accreditation acquired	
2007 April	Phase 4 water purification facilities construction project implemented	
	Phase 6 water distribution pipe construction project implemented	
2008 December	International foodstuffs safety control standard	
	ISO22000 accreditation acquired	

Chronology of Industrial Water Facilities

Year/Month	Items relating to Waterworks Facilities	Water supply capacity
1951 March	Commencement of industrial waterworks construction project (Planned water supply volume: 52,500 m ³ /day, construction of Fukushima water purification plant, supply district: The whole of Konohana-ku and part of Fukushima-ku)	52,500 m ³ /day
1954 June	Start of partial supply water from the industrial waterworks construction project (Fukushima purification plant sedimentation water used)	
July	Ceremony marking water transmission from the industrial waterworks construction project	
1955 July	Commencement of full volume water supply from the industrial waterworks construction project (Fukushima water purification plant system: 52,500m ³ /day, filtration water used)	
	Ceremony to mark completion of the industrial waterworks construction project	
August	Mikuni waterproof waterworks used for industrial waterworks and water supply initiated (Mikuni water supply volume: 3,000 m ³ /day, new Mikuni water distribution plant constructed, water supply area: the whole of Higashi Yodogawa-ku)	55,500 m ³ /day
1956 June	Industrial Water Law enacted	
1957 November	Commencement of first industrial waterworks expansion project (Planned water supply volume: 40,000 m ³ /day, Fukushima water purification plant expanded to 17,000 m ³ /day, Mikuni water distribution plant expanded to 23,000 m ³ /day, water supply area: the whole of Nishi Yodogawa-ku and Yodogawa-ku)	
1958 October	Industrial Waterworks Project Law enacted	
1959 April	Commencement of second industrial waterworks expansion project (Planned water supply volume: 160,000 m ³ /day, construction of new Konohana water purification plant: 67,000 m ³ /day, construction of Higashi Yodogawa water purification plant: 93,000 m ³ /day, supply area: the whole of Fukushima-ku, Konohana-ku, Nishi Yodogawa-ku and Yodogawa-ku and part of Kita-ku and Higashi Yodogawa-ku)	78,500 m ³ /day
1959 May	Commencement of partial water supply from the first industrial waterworks project (Mikuni water distribution plant system increased by 23,000 m ³ /day)	
June	Ceremony to mark partial water transmission from the first industrial waterworks expansion project	
November	Commencement of full water supply from the first industrial waterworks expansion project (Fukushima water purification plant system increased by 17,000 m ³ /day)	95,500 m ³ /day
1960 February	First industrial waterworks expansion project completed	
1961 April	Separation and independence of industrial waterworks operations from waterworks operations	
September	Partial water supply initiated from the second industrial waterworks expansion project (Konohana water purification plant system: 67,000 m ³ /day)	162,500 m ³ /day
1962 April	Commencement of third industrial waterworks expansion project (Planned water supply: 225,000 m ³ /day, construction of Joto water purification plant: 153,000 m ³ /day, Higashi Yodogawa water purification plant increased by 58,000m ³ /day, Fukushima water purification plant increased by 14,000m ³ /day, water supply area: The whole of Fukushima-ku, Higashinari-ku, Asahi-ku, Tsurumi-ku and Joto-ku and part of Kita-ku and Higashi Yodogawa-ku)	255,500 m ³ /day
1963 April	Commencement of full water supply from the second industrial waterworks expansion project (Higashi Yodogawa water purification plant system: 93,000 m ³ /day)	
April	Commencement of the fourth industrial waterworks expansion project (Planned water supply volume: 95,000 m ³ /day, construction of Nishinari water purification plant: 60,000 m ³ /day, Fukushima water purification plant increased by 12,500 m ³ /day, Konohana water purification plant increased by 22,500 m ³ /day, water supply area: in addition to the first specified area, the whole	

Year/Month	Items relating to Waterworks Facilities	Water supply capacity
	of Minato-ku, Taisho-ku, Naniwa-ku and Nishinari-ku and part of Ikuno-ku, Suminoe-ku, Hirano-ku and Higashi Sumiyoshi-ku)	
1964 November	Second industrial waterworks expansion project completed	
October 1965	Commencement of partial water supply from the third industrial waterworks expansion project (Higashi Yodogawa water purification plant system increased by 58,000 m ³ /day)	313,500 m ³ /day
April	Commencement of the fifth industrial waterworks expansion project	
October	Commencement of partial water supply from the fourth industrial waterworks expansion project (Nishinari water purification plant system: 60,000 m ³ /day, by divided supply from Osaka coastal industrial waterworks union)	373,500 m ³ /day
1966 March	Commencement of partial water supply from the third industrial waterworks expansion project (Wager conveyed from the Joto and Fukushima water purification plants, Fukushima water purification plant increased by 14,000 m ³ /day)	387,500 m ³ /day
1967 February	Commencement of full water supply from the third industrial waterworks expansion project (Joto water purification plant system: 153,000 m ³ /day)	540,500 m ³ /day
December	Commencement of partial water supply from the fourth industrial waterworks expansion project (Fukushima water purification plant system increased by 12,500 m ³ /day, Konohana water purification plant system increased by 22,500 m ³ /day, water supply area: part of Ikuno-ku, Hirano-ku and Higashi Sumiyoshi-ku)	575,500 m ³ /day
1968 February	Fourth industrial waterworks expansion project completed (Nishinari water purification plant system: 60,000 m ³ /day)	
November	Fifth industrial waterworks expansion project suspended	
1976 May	Operations suspended at Mikuni water distribution station (26,000 m ³ /day) and Kunijima water transmission pumping station abolished (26,000 m ³ /day)	549,500 m ³ /day
1977 April	Mikuni water distribution station abolished (26,000 m ³ /day)	
1979 March	Operations at Fukushima water purification plant suspended (96,000 m ³ /day)	453,500 m ³ /day
1980 March	Operations at Nishinari water purification plant suspended and gratuitous transfer of jurisdiction to the sewage bureau effected (60,000 m ³ /day)	423,500 m ³ /day
April	Installation of in-house industrial water at Osaka coastal industrial waterworks business group and 30,000 m ³ /day sub-distributed to Nishinari system for Osaka City	
1983 March	Fukushima water purification plant abolished (96,000m ³ /day)	
1984 March	Osaka coastal industrial waterworks business group in-house industrial water expanded (Nishinari system: 30,000 m ³ /day => 40,000 m ³ /day)	433,500 m ³ /day
September	Operations at Konohana water purification plant suspended (89,500 m ³ /day) and moved as a water distribution station	344,000 m ³ /day
1992 April	Konohana water purification plant (89,500 m ³ /day) and Kunijima water transmission pumping station (26,000 m ³ /day) abolished and capacities of Joto water purification plant and Nishinari system changed (Joto system: 153,000 m ³ /day => 109,000 m ³ /day)	300,000 m ³ /day
1993 April	Commencement of industrial waterworks reconstruction project	
2000 April	Commencement of industrial waterworks reconstruction project (Phase 2)	
2004 March	Dissolution of the Osaka coastal industrial waterworks business group	
April	Commencement of the industrial waterworks area expansion project	
	Provisional launch of operations at Tsumori water purification plant (Higashi Yodogawa water purification plant system: 151,000 m ³ /day => 146,000 m ³ /day, Nishinari system; 40,000 m ³ /day => 45,000 m ³ /day)	
2007 March	Industrial waterworks area expansion project completed	
	Tsumori water purification plant abolished (Nishinari system: 45,000 m ³ /day)	
April	Higashi Yodogawa water purification plant service area expanded to include Nishinari system and Nanko area (Higashi Yodogawa water purification plant system: 146,000 m ³ /day => 151,000 m ³ /day)	260,000 m ³ /day

Note 1) The operating water supply capacity shown in this paper indicates the actual operation capacity in those days, so it does not correspond with the capacity reported in the notification of business.
 Note 2) The Nishinari water purification plant has never been in operation. However, since the Nishinari system received water as raw water for the business group Tsumori water purification plant, calculations are shown based on its water receiving capacity.