

Fatal and non-fatal accidents in city water service in Japan in 1999-2022

city water service industry Code No.011603

Type of accidents in city water service in 1999-2022

Type of accidents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
fall from height	4	10	11	6	7	8	13	5	11	13	12	11	10	13	8	9	10	11	15	9	8	16	13	15	248
falling to same level	16	7	12	8	13	14	8	12	11	9	17	10	17	17	5	12	8	10	11	17	11	11	12	16	284
crash	2	3	3	2	2	1	1	2	2	7	3	2	1	3	3	2	2			1	1	3	3	4	53
struck by flying or falling object	1	3	2	3	2	1	4	2	2	1	1	4	3	3	2	3	3	1	1	3	3		4	1	53
collapse	1			1	1	1		2				1			1			1			1	1	1	1	13
crashed by	1	1	3			1	1		3	1	1	1			1	1	1		2		1	2	5	2	28
caught in/between	3	2	7	3	4	3	4	2	7	3	7	3	3	2	2	3	2	1	1	2	4	5	3	6	82
cut	1	1		2		3	1	3			3		4	4	1	1	1	1		3		2	2	1	34
injury to the sole of the foot		1			1						1	1													4
drown						2		1			1		4					1	1				1		11
contact to high/low-									3	1	1	2						1		1			4	1	14

temperature																										
contact to harmful substance	1	1		2	1	2		2	1	1						1	2	1					2			17
electric shock	1	2		1						2		1											1			8
explosion																										
burst																								1		1
fire								1																		1
traffic accident (public road)	3	9	9	7	11	12	4	7	6	8	13	7	7	8	10	8	9	5	8	5	9	5	3	7	180	
traffic accident (others)												1					1									2
reaction to motion/improper motion	4	8	10	4	5	1	8	12	4	6	5	8	8	6	3	8	4	3	7	4	4	3	5	10	140	
others		1	2			1	2		1	2			2	1		1			1			2	2		18	
unclassifiable				1							1		1											1	4	
total	38	49	59	40	47	50	46	51	51	54	66	52	60	57	36	49	43	36	47	45	42	53	59	65	1,195	

Causal agents (large) of fatal and non-fatal accidents in city water service in 1999-2022

Causal (L) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
machine	1	3	2	5	1	4	3	4	4	2	2	1	6	5	2	2	3	1	1	2	3	4	3	2	66

crane, conveying machine	5	11	13	12	11	16	6	14	10	13	22	16	12	10	10	8	12	6	9	7	10	7	7	11	258
other equipment	3	7	7	5	7	4	5	5	5	9	8	5	6	2	6	10	4	7	6	6	6	13	13	13	162
temporary buildings, establishments	18	16	23	12	20	16	17	15	21	22	23	19	25	28	14	20	17	16	23	23	19	23	25	26	481
substance, material	2	3	3		3	2	5	8	5	4	2	4	2	2	2	2	4	2		1	2	1	2	1	62
load	1	3	2	1			1	1	2	1	3	1		1		2	1		2	1			1		24
environment	5		3	4	2	4	4	2	3	2	5	2	6	3		4	1	2		3	1	2	4	3	65
others	3	6	6	1	3	4	5	2	1	1	1	4	3	6	2	1	1	2	6	2	1	3	4	9	77
total	38	49	59	40	47	50	46	51	51	54	66	52	60	57	36	49	43	36	47	45	42	53	59	65	1,195

Causal agents (middle) of fatal and non-fatal accidents in city water service in 1999-2022

Causal (M) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
engine												1													1
power transmission mechanism						1		1			1		3		1	1	2						1		11
woodworking machine				1		2		1			1		1	1		1				1		1	1		11

pressure vessel																								
other pressure vessels																								
chemical facilities																								
gas welding equipment																								
arc welding equipment																								
other welding equipment																								
kiln, caldron																								
industrial dryer																								
other kiln, caldron																								
transmission															1						1			2
electric power facilities										2		1												3
other electrical equipment			2																					2
human power cranes																								
human power hauling equipment			1				1	1		1			1		2		1	1		1		1	1	12

human power machine															1									1	
hand tool			1			2	1			3	2	1		2	1			2	2			2	1	20	
ladder			3		2		1	1	3	5	4	1	2	1	2	2	2	3	2	2	1	4	5	1	47
slinging tool									1															1	
other tools					2							1		1	1		1		1	3	3	2	4	19	
other equipment, facilities					2		1	2	1	1	1	1	1	1	1	2	2	2	1	1	1	5	3	6	35
scaffolding					1		1																1	3	
timbering																									
stairs, landing stage			3		2		5	2	5	5	5	7	9	12	1	4	4	5	6	4	2	9	5	4	99
opening			1				2		1	2	2			1	1	1	1	2	3		2	2		21	
roof, beam, haze, crossbeam, principal rafter					1								1	1									1	4	
working platform, boot board					2		1	3		2	2	2	2			1	3	2		1		1	2	2	26
passage			6		7		3	5	7	6	2	3	6	8	2	8	6	4	7	13	11	5	6	9	124
building, establishment			7		6		3	4	6	6	9	7	5	1	8	3	2	2	3	2	2		3	7	86
other temporary buildings,			6		1		2	1	2	1	3		2	5	2	3	1	1	4	3	2	6	7	4	56

environment																					1			1	
high/cold temperature environment			1						1			1						1		1			3	2	10
other environments			1		1		2	1	1	2	2			2		3		1		2	1	1	1		21
other causal agent			1		1		2	1	1	1		1		1					2			2	2	3	18
no causal agent			4		2		3	1				3	3	5	2	1	1	2	4	1	1	1	2	5	41
unclassifiable			1								1									1				1	4
total	38	49	59	40	47	50	46	51	51	54	66	52	60	57	36	49	43	36	47	45	42	53	59	65	1,195

Workers age of fatal and non-fatal accidents in city water service in 1999-2022

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
19 years old or less			1	1	1											1	1			1					6
20-29	2	5	5	3	3	5	3	2	3	2	5	5	2	2	2	1	1	3	2	1	7	3	5	3	75
30-39	8	6	8	5	5	7	12	5	13	11	10	6	8	6	8	6	2	2	4	3	3	2	7	8	155
40-49	7	6	10	8	12	9	10	10	6	12	16	8	13	14	7	11	10	8	13	12	11	11	21	15	260
50-59	14	21	20	16	17	19	13	23	18	21	19	16	21	18	11	15	9	16	11	14	12	15	10	13	382
60 years old or more	7	11	15	7	9	10	8	11	11	8	16	17	16	17	8	15	20	7	17	14	9	22	16	26	317
total	38	49	59	40	47	50	46	51	51	54	66	52	60	57	36	49	43	36	47	45	42	53	59	65	1,195

Workers' number of workplace of fatal and non-fatal accidents in city water service in 1999-2022

Workers scale	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
9 workers or less	9	3	12	6	10	7	10	9	4	3	5	3	6	10	3	4	5	3	3	2	6	4	7	6	140
10-29	9	15	10	12	12	16	13	12	15	16	19	14	13	16	13	9	9	10	8	16	9	13	17	15	311
30-49	4	12	11	3	7	9	8	7	11	10	17	14	12	11	7	15	10	10	13	11	12	9	16	17	256
50-99	8	6	12	3	7	9	4	13	10	13	10	6	13	11	6	11	9	5	11	11	5	5	6	10	204
100-299	4	12	11	12	10	9	8	10	8	11	12	11	11	7	4	9	9	6	6	5	8	15	12	13	223
300 workers or more	4	1	3	4	1		3		3	1	3	4	5	2	3	1	1	2	6		2	7	1	4	61
total	38	49	59	40	47	50	46	51	51	54	66	52	60	57	36	49	43	36	47	45	42	53	59	65	1,195

Month of fatal and non-fatal accidents in city water service in 1999-2022

Month	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
January	5	2	4		6	4	3	8	4	1	4	3	3	6	7	5	3	3	3	2	3	6	6	2	93
February	6	4	5	4	2	4	9	8	4	5	9	6	6	5	1	2	5	3	4	6	4	4	4	8	118
March	2	3	10	2	4	5	4	3	5	6	5	4	9	5	2	4	3	1	2	2	1	2	5	3	92
April	1	3	5	8	6	6	1	3	3	2	8	2	5	6	2	4	7	1	2	7		5	7	7	101
May	4	4	8	3	5	2	4	5	7	8	5	7	4	8	4	3	4	2	3	1	4	8	5	5	113
June	4	6	2	5	5	5	3	2	3	7	1	6	5	3	3	4	2	1	8	4	7	7	4	4	101

July	1	7	7	3	5	7	8	3	4	9	4	4	4	3	3	2	3	2	3	4	3	5	5	9	108
August	3	1	3	2	4	7	6	6	6	3	7	8	5	4	3	3	3	7	4	5	2	2	7	4	105
September	6	4	3	3	3	2	1	2	6	7	5	4	6		2	8	2	4	3	3	2	4	3	7	90
October	1	6	6	1	3	3	3	4	1	3	8	2	6	2	5	4	6	4	6	4	6	6	3	6	99
November	4	7	4	7	3	3	1	3	3	1	5	5	3	9	1	6	3	5	3	3	6	1	4	5	95
December	1	2	2	2	1	2	3	4	5	2	5	1	4	6	3	4	2	3	6	4	4	3	6	5	80
total	38	49	59	40	47	50	46	51	51	54	66	52	60	57	36	49	43	36	47	45	42	53	59	65	1,195

Prefecture of fatal and non-fatal accidents in city water service in 1999-2022

Prefecture	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
Hokkaido	1	2	2		2		4	2	3	4	3	1		1		4	1	3	2	3	3	1	1	2	45
Aomori		1														2			1	1	2			1	8
Iwate			1		1			4	1		1	1	2					2						1	14
Miyagi	1	2	2				1	1	2	3	1		6	4		1			1			2			27
Akita			1										1	1			1							1	5
Yamagata	1	1	1				2					1								1			1		8
Fukushima							1	2	1		3					1	1			1			1		11
Ibaraki	1				1				1		1				3		1			1		1	1		11
Tochigi	1	1											2										1		5
Gunma			2						1				1						1					2	7

Shimane												1	1		1							1		1	5
Okayama	1		1		1							2		1	1			1	1		1			1	11
Hiroshima		1	2		3		5		1			1	3	1	3	1			5	1	3	6	1	2	39
Yamaguchi		2	1		2									1	2	1	2	1				1	2	1	16
Tokushima							2																1		3
Kagawa		1	2				1	2	2	2		1	1	2	1	2	4		2	1	2	1	1	1	29
Ehime		1									1			1			1	2	2	1			1	1	11
Kochi	1						1			1				1	1										5
Fukuoka	1	3	2		2			1		2	4	5	1	1	2	2	1		1		1	2	3	3	37
Saga														1	1				1				1		4
Nagasaki					2		1		2	1					1				1	1			1	1	11
Kumamoto		1	2				2		3			1	2		1	1		1	2			2	1		19
Oita					1							1	1				1							1	5
Miyazaki	2		1														1		1						5
Kagoshima			1				2	2								1	1	1			2		2	1	13
Okinawa							1		1	1										2	1		2	1	9
total	38	49	59	40	47	50	46	51	51	54	66	52	60	57	36	49	43	36	47	45	42	53	59	65	1,195

Fatal and non-fatal accidents mean fatal and non-fatal injuries and occupational diseases with work absence of 4 days and more.

Data of 2022 year do not include Covid-19 cases. Data of 2020 & 2021 year include Covid-19 cases. Fatal and non-fatal data are same situation.

Data of 2011 year include fatal and non-fatal accidents caused by Great East Japan Earthquake in 2011.

drown					1		1	1		1		4					1	1				1		11
contact to high/low-temperature																								
contact to harmful substance					2										1									3
electric shock		1							1															2
explosion																								
burst																								
fire																								
traffic accident (public road)																								
traffic accident (others)																								
reaction to motion/improper motion																								
others												1			1									2
unclassifiable			1																					1
total		1	2		1	3	2	1	3	1	1		5			2	2	2	2			2	1	31

Causal agents (large) of fatal accidents in city water service in 1999-2022

environment																								
high/cold temperature environment																								
other environments															1		1							2
other causal agent																								
no causal agent																								
unclassifiable			1																					1
total		1	2		1	3	2	1	3	1	1		5			2	2	2	2			2	1	31

Workers age of fatal accidents in city water service in 1999-2022

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
19 years old or less																									
20-29													1			1									2
30-39						2	1		1	1			1												6
40-49					1												1								2
50-59		1	2			1	1		1		1		1			1	1	2					1		13
60 years old or more								1	1				2						2				2		8
total		1	2		1	3	2	1	3	1	1		5			2	2	2	2			2	1		31

Shimane																								
Okayama																								
Hiroshima						1														1				2
Yamaguchi																1	1							2
Tokushima																								
Kagawa																								
Ehime																								
Kochi																								
Fukuoka																								
Saga																								
Nagasaki																								
Kumamoto																								
Oita																								
Miyazaki																								
Kagoshima																1								1
Okinawa									1															1
total		1	2		1	3	2	1	3	1	1		5			2	2	2	2			2	1	31

Data sources: <https://anzeninfo.mhlw.go.jp/user/anzen/tok/anst00.html> (MHLW, Japan)

Return to https://www.jisha.or.jp/english/statistics/2022e_industry.html