

Drinking Water Supplies and Water Quality in 2022

Tables 1, 2 and 3 and Figure 1 provide an overview of public drinking water supplies for Northern Ireland in 2022. The subsequent water quality tables provide detail of where full compliance with the regulatory standards has not been met in the individual water supply zones. The water quality tables present, by parameter, all the contraventions and the ‘% compliance’ that occurred in water supply zones and at supply points at water treatment works during 2022. Additional information is also provided on the cause of each contravention and the nature and timeframe for any required remedial actions carried out to bring the water supply into compliance with the regulations. The map in Figure 1 shows the water supply zones from which samples are collected across Northern Ireland. These, when used in conjunction with the information in the parameter tables that follow, will allow the reader to have a more local focus on water quality issues.

Table 1: Public supply statistics for Northern Ireland in 2022

Total population		1,899,379
Number of water supply zones		55
Total volume of water supplied (Megalitres)		605.94
Water sources by percentage volume	Ground	0.1%
	Surface	99.9%
	Mixed/Other	0%
Water treatment works		25
Service reservoirs		287
Water supply zones		55

Table 2: Water Supply Zones within each Council area in 2022

Council	Water Supply Zones*	
Antrim and Newtownabbey Borough	ZN0302 - Dungonnell Glarryford ZN0401 - Dunore Point Antrim ZN0402 - Killylane Ballynure ZS0106 - Dunore Belfast North	ZS0109 - Dorisland Whiteabbey ZS0111 - Dunore Point Hydepark ZS0503 - Forked Bridge Stoneyford
Ards and North Down Borough	ZS0108 - Belfast Purdysburn ZS0405 - Drumaroad Ards West ZS0406 - Drumaroad Portaferry ZS0407 - Drumaroad Bangor West	ZS0408 - Drumaroad Bangor East ZS0501 - Drumaroad Lisburn ZS0601 - Drumaroad Ballynahinch
Armagh City, Banbridge and Craigavon Borough	ZN1101 - Clay Lake Keady ZN1102 - Seagahan Armagh ZS0810 - Castor Bay Tandragee ZS0811 - Castor Bay Portadown	ZS0812 - Castor Bay Craigavon East ZS0814 - Castor Bay Moira ZS0902 - Fofanny Dromore ZS0904 - Fofanny Mourne
Belfast City	ZS0101 - Dunore Ballygomartin North ZS0102 - Dunore Ballygomartin South ZS0103 - Belfast Ballyhanwood ZS0104 - Belfast Breda North ZS0105 - Belfast Breda South ZS0106 - Dunore Belfast North ZS0107 - Belfast Oldpark	ZS0108 - Belfast Purdysburn ZS0109 - Dorisland Whiteabbey ZS0111 - Dunore Point Hydepark ZS0405 - Drumaroad Ards West ZS0501 - Drumaroad Lisburn ZS0502 - Forked Bridge Dunmurry ZS0503 - Forked Bridge Stoneyford
Causeway Coast and Glens Borough	ZN0102 - Ballinrees West ZN0103 - Ballinrees East ZN0202 - Altnahinch Bushmills ZN0204 - Rathlin Island ZN0302 - Dungonnell Glarryford	ZN0501 - Moyola Magherafelt ZN0601 - Ballinrees Limavady ZN0603 - Carmoney Eglinton ZN0604 - Caugh Hill Dungiven ZN0607 - Corrody Derry
Derry City and Strabane District	ZN0603 - Carmoney Eglinton ZN0604 - Caugh Hill Dungiven ZN0607 - Corrody Derry	ZN0701 - Derg Strabane ZN0704 - Lough Bradan Drumquin
Fermanagh and Omagh District	ZN0701 - Derg Strabane ZN0702 - Glenhordial Omagh ZN0704 - Lough Bradan Drumquin ZN0705 - Lough Macrory Beragh	ZN0706 - Lough Macrory Killyclogher ZN0801 - Belleek Garrison ZN0803 - Killyhevlin West ZN0804 - Killyhevlin East
Lisburn and Castlereagh City	ZN0401 - Dunore Point Antrim ZS0103 - Belfast Ballyhanwood ZS0108 - Belfast Purdysburn ZS0111 - Dunore Point Hydepark ZS0405 - Drumaroad Ards West ZS0501 - Drumaroad Lisburn	ZS0502 - Forked Bridge Dunmurry ZS0503 - Forked Bridge Stoneyford ZS0601 - Drumaroad Ballynahinch ZS0814 - Castor Bay Moira ZS0902 - Fofanny Dromore
Mid and East Antrim Borough	ZN0302 - Dungonnell Glarryford ZN0303 - Dunore Point Ballymena ZN0401 - Dunore Point Antrim	ZN0402 - Killylane Ballynure ZS0109 - Dorisland Whiteabbey ZS0201 - Dorisland Carrick
Mid Ulster District	ZN0103 - Ballinrees East ZN0501 - Moyola Magherafelt ZN0502 - Lough Fea Cookstown ZN0504 - Moyola Unagh Mormeal ZN0705 - Lough Macrory Beragh	ZN0706 - Lough Macrory Killyclogher ZN0804 - Killyhevlin East ZN1102 - Seagahan Armagh ZS0809 - Castor Bay Dungannon ZS0811 - Castor Bay Portadown
Newry, Mourne and Down District	ZN1101 - Clay Lake Keady ZS0501 - Drumaroad Lisburn ZS0601 - Drumaroad Ballynahinch ZS0602 - Drumaroad Downpatrick ZS0810 - Castor Bay Tandragee	ZS0901 - Castor Bay Newry West ZS0902 - Fofanny Dromore ZS0904 - Fofanny Mourne ZS1001 - Carran Hill Crossmaglen ZS1002 - Carran Hill Camly

* excludes water supply zones with fewer than 40 properties within the council area.

Table 3: Water supply zones - Populations and Volume Supplied in 2022

Zone ID	Zone Name	Residential Population	Volume supplied (m ³ /d)
ZN0102	Ballinrees West	70,913	15,600,860
ZN0103	Ballinrees East	27,009	5,941,980
ZN0202	Altnahinch Bushmills	33,836	7,443,920
ZN0302	Dungonnell Glarryford	28,355	6,238,100
ZN0303	Dunore Point Ballymena	50,052	11,011,440
ZN0401	Dunore Point Antrim	70,096	15,421,120
ZN0402	Killylane Ballynure	49,846	10,966,120
ZN0501	Moyola Magherafelt	44,528	9,796,160
ZN0502	Lough Fea Cookstown	25,853	5,687,660
ZN0504	Moyola Unagh Mormeal	13,850	3,047,000
ZN0601	Ballinrees Limavady	21,256	4,676,320
ZN0603	Carmoney Eglinton	56,176	12,358,720
ZN0604	Caugh Hill Dungiven	17,862	3,929,640
ZN0607	Corrody Derry	61,639	13,560,580
ZN0701	Derg Strabane	41,681	9,169,820
ZN0702	Glenhordial Omagh	12,030	2,646,600
ZN0704	Lough Bradan Drumquin	24,285	5,342,700
ZN0705	Lough Macrory Beragh	11,731	2,580,820
ZN0706	Lough Macrory Killyclogher	23,779	5,231,380
ZN0801	Belleek Garrison	5,022	1,104,840
ZN0803	Killyhevin West	39,231	8,630,820
ZN0804	Killyhevin East	40,353	8,877,660
ZN1101	Clay Lake Keady	9,881	2,173,820
ZN1102	Seagahan Armagh	37,792	8,314,240
ZS0101	Dunore Ballygomartin North	46,532	10,237,040
ZS0102	Dunore Ballygomartin South	50,337	11,074,140
ZS0103	Belfast Ballyhanwood	62,496	13,749,120
ZS0104	Belfast Breda North	44,168	9,716,960
ZS0105	Belfast Breda South	59,424	13,073,280
ZS0106	Dunore Belfast North	50,657	11,144,540
ZS0107	Belfast Oldpark	46,280	10,181,600
ZS0108	Belfast Purdysburn	40,829	8,982,380
ZS0109	Dorisland Whiteabbey	51,247	11,274,340
ZS0111	Dunore Point HydePark	35,615	7,835,300
ZS0201	Dorisland Carrick	39,826	8,761,720
ZS0405	Drumaroad Ards West	70,754	15,565,880
ZS0406	Drumaroad Portaferry	19,553	4,301,660
ZS0407	Drumaroad Bangor West	48,518	10,673,960
ZS0408	Drumaroad Bangor East	38,029	8,366,380
ZS0501	Drumaroad Lisburn	65,288	14,363,360
ZS0502	Forked Bridge Dunmurry	62,216	13,687,520
ZS0503	Forked Bridge Stoneyford	29,149	6,412,780

Table 3: Water supply zones - Populations and Volume Supplied in 2022

Zone ID	Zone Name	Residential Population	Volume supplied (m ³ /d)
ZS0601	Drumaroad Ballynahinch	57,514	12,653,080
ZS0602	Drumaroad Downpatrick	43,538	9,578,360
ZS0814	Castor Bay Moira	31,213	6,866,860
ZS0809	Castor Bay Dungannon	60,475	13,304,500
ZS0810	Castor Bay Tandragee	55,785	12,272,700
ZS0811	Castor Bay Portadown	52,789	11,613,580
ZS0812	Castor Bay Craigavon East	52,630	11,578,600
ZS0901	Castor Bay Newry West	22,962	5,051,640
ZS0902	Fofanny Dromore	37,503	8,250,660
ZS0904	Fofanny Mourne	63,635	13,999,700
ZS1001	Carran Hill Crossmaglen	10,171	2,237,620

Water Quality in Water Supply Zones in 2022

Table 4: % Compliance – Aluminium (µg/l)

Sampling Location - Zones	Number of Samples	Number of Non-compliant Tests	Cause	Remedial Action	Remedial Action Timeframe	Restriction Required	Maximum Value Reported (in zone)	Median (Total Analyses)	Median (Non-compliances)	% Compliance
ZS0103	52	1	P; U	O	S	No	220	54.50	220	98.08
ZS0405	52	1	P; O	O	S	No	490	78.00	490	98.08
ZS0601	52	1	P; O	O	S	No	210	74.00	210	98.08
ZS0809	52	1	D; O	O	S	No	350	27.00	350	98.08
All other zones	1795	0								100.00
Overall	2003	4								99.80

Table 5: % Compliance – Coliform bacteria (number/100ml)

Sampling Location - Zones	Number of Samples	Number of Non-compliant Tests	Cause	Remedial Action	Remedial Action Timeframe	Restriction Required	Maximum Value Reported (in zone)	Median (Total Analyses)	Median (Non-compliances)	% Compliance
ZN0704	60	2	D; U	O	S	N	16	0	9.5	96.67
ZN0504	36	1	D; U	O	S	N	1	0	1	97.22
ZN0604	48	1	P; D; U	O; P2	S	N	>100	0	1	97.92
ZS0111	96	2	D; U	O	S	N	1	0	1	97.92
ZN0607	156	2	D; U	O	S	N	>100	0	52.5	98.72
ZS0502	156	2	D; U	O	S	N	1	0	1	98.72
ZS0902	96	1	D; O	O	S	N	1	0	1	98.96
ZN0803	96	1	D; U	O	S	N	1	0	1	98.96
ZS0107	120	1	D; U	O	S	N	2	0	2	99.17
ZS0101	120	1	D; U	O	S	N	2	0	2	99.17
ZN0402	120	1	D; U	O	S	N	1	0	1	99.17
ZS0811	132	1	D; U	O	S	N	4	0	4	99.24
ZS0105	144	1	D; U	O	S	N	2	0	2	99.31
ZN0603	144	1	D; U	O	S	N	1	0	1	99.31
ZS0810	144	1	D; U	O	S	N	21	0	21	99.31
ZS0103	156	1	D; U	O	S	N	6	0	6	99.36
ZS0809	156	1	D; U	O	S	N	4	0	4	99.36
ZN0102	180	1	D; U	O	S	N	1	0	1	99.44
All other zones	3408	0								100.00
Overall	5568	22								99.60

Table 6: % Compliance – *E. coli* (number/100ml)

Sampling Location – Zones	Number of Samples	Number of Non-compliant Tests	Cause	Remedial Action	Remedial Action Timeframe	Restriction Required	Maximum Value Reported (in zone)	Median (Total Analyses)	Median (Non-compliances)	% Compliance
ZN0704	60	1	D; U	O	S	N	1	0	1	98.33
All other zones	5508	0								100.00
Overall	5568	1								99.98

Table 7: % Compliance – Iron (µg/l)

Sampling Location - Zones	Number of Samples	Number of Non-compliant Tests	Cause	Remedial Action	Remedial Action Timeframe	Restriction Required	Maximum Value Reported (in zone)	Median (Total Analyses)	Median (Non-compliances)	% Compliance
ZN0604	24	2	P	O; P2	S	N	310	14.00	310	91.67
ZN0302	24	1	P	P; P2	S	N	270	4.05	270	95.83
ZN0504	24	1	Investigations ongoing at time of publication			N	270	16.50	270	95.83
ZN0702	24	1	P	P2; O	M	N	610	11.00	475	95.83
ZS0406	24	1	P	O; P2	S	N	370	24.50	315	95.83
ZN0603	51	2	D; P	O; P2	S	N	580	24.00	425	96.08
ZN0607	52	2	P; D; U	O	S	N	340	5.25	340	96.15
ZS0109	52	2	Investigations ongoing at time of publication			N	420	5.70	420	96.15
ZS0108	36	1	Investigations ongoing at time of publication			N	510	12.00	485	97.22
ZN0102	52	1	D; P	O	S; M	N	450	21.50	450	98.08
ZN0401	52	1	N/A	N/A	N/A	N	340	6.85	340	98.08
ZS0601	52	1	D; P	O	S	N	400	6.45	400	98.08
ZS0809	52	1	P	O	S	N	310	14.00	310	98.08
All other zones	1484	0								100.00
Overall	2003	17								99.15

Table 8: % Compliance – Lead (µg/l)

Sampling Location – Zones	Number of Samples	Number of Non-compliant Tests	Cause	Remedial Action	Remedial Action Timeframe	Restriction Required	Maximum Value Reported (in zone)	Median (Total Analyses)	Median (Non-compliances)	% Compliance
ZN1101	8	1	Investigations ongoing at time of publication			N	16	0.04	16	87.50
ZS0107	8	1	D; U	O	S	N	27	0.085	27	87.50
ZS0408	8	1	D; O	O	S	N	15	0.1095	15	87.50
ZS0902	8	1	D; O	O	S; M	N	13	0.095	13	87.50
All other zones	400	0								100.00
Overall	432	4								99.07

Table 9: % Compliance – Nickel (µg/l)

Sampling Location - Zones	Number of Samples	Number of Non-compliant Tests	Cause	Remedial Action	Remedial Action Timeframe	Restriction Required	Maximum Value Reported (in zone)	Median (Total Analyses)	Median (Non-compliances)	% Compliance
ZN0803	8	1	O	O	M	O	23	1.2	23	87.50
ZS1001	8	1	P; O	O	S	P; O	41	2.45	41	87.50
All other zones	416	0								100.00
Overall	432	2								99.54

Table 10: % Compliance – Odour (dilution number)

Sampling Location - Zones	Number of Samples	Number of Non-compliant Tests	Cause	Remedial Action	Remedial Action Timeframe	Restriction Required	Maximum Value Reported (in zone)	Median (Total Analyses)	Median (Non-compliances)	% Compliance
ZS0602	36	1	D	O	S	N	10	0	10	97.22
All other zones	1950	0								100.00
Overall	1986	1								99.95

Table 11: % Compliance – Taste (dilution number)

Sampling Location - Zones	Number of Samples	Number of Non-compliant Tests	Cause	Remedial Action	Remedial Action Timeframe	Restriction Required	Maximum Value Reported (in zone)	Median (Total Analyses)	Median (Non-compliances)	% Compliance
ZN0204	4	1	D; U	O	S	N	2	0	2	75.00
ZS0602	36	1	D	O	S	N	Not tasted due to unexpected odour	0	n/a	97.22
All other zones	1945	0								100.00
Overall	1985	2								99.90

Table 12: % Compliance – Total Trihalomethanes (µg/l)

Sampling Location – Zones	Number of Samples	Number of Non-compliant Tests	Cause	Remedial Action	Remedial Action Timeframe	Restriction Required	Maximum Value Reported (in zone)	Median (Total Analyses)	Median (Non-compliances)	% Compliance
ZN0302	8	1	T; P	T	S; L	N	110	68.5	110	87.50
ZN0607	8	1	P; S	O	S; L	N	110	63.5	110	87.50
ZN0701	8	1	T; P	T; P2; O	M/L	N	140	59.5	140	87.50
ZN0704	8	1	S; T	P2; T; O	S; M	N	110	59.5	110	87.50
ZN0804	8	1	P; S	O; P2	S	N	110	78.5	110	87.50
All other zones	389	0								100.00
Overall	429	5								98.83

Appendix 1

Table 1.1: Coding system for the causes of non-compliance

Code	Cause
C	Catchment related
T	Treatment Plant related
P	Public Distribution Network related
D	Domestic Distribution System related
O	Other Cause
S	Combined Causes
U	Unknown Cause

Table 1.2: Coding system for remedial actions in case of non-compliance

CODE*	Description of remedial action
<i>C for catchment related</i>	
C1	Action(s) to terminate or mitigate the cause
C2	Action(s) to replace source
<i>T for treatment related</i>	
T	Establishing, upgrading or improving treatment
<i>P for public distribution network related</i>	
P1	Replacement, disconnection or repair of defective components
P2	Cleaning, scouring and/or disinfecting contaminated components
<i>D for domestic distribution system**</i>	
D1	Replacement, disconnection or repair of defective components
D2	Cleaning, scouring and/or disinfecting contaminated components
<i>S for Security measures to prevent unauthorised access</i>	
S1	Security measures to prevent unauthorised access
<i>O for Others</i>	
<i>E for Emergency actions for the consumers' health and safety</i>	
E1	Notification of and instructions to consumers (for example, prohibition of use, boil water order, temporary limitations on consumption).
E2	Provision of a temporary alternative drinking water supply (for example, bottled water, water in containers, tankers).
<i>N for None Required</i>	

*More than one of the above codes may apply

**Including domestic installations where water is served to the public

Table 1.3: Coding system for the remedial action timeframe

Code	Timeframe	Details
I	Immediate	not more than 1 day
S	Short-term	not more than 30 days
M	Medium-term	more than 30 days but not more than a year
L	Long-term	more than a year

Table 1.4: Coding system for the timeframe of restriction or prohibition in use

Code	Timeframe	Details
I	Immediate	not more than 1 day
V	Very short-term	not more than one week
S	Short-term	not more than 30 days
M	Medium-term	more than 30 days but not more than a year
L	Long-term	more than a year