OR Annual report 2020

Appendices

Reykjavík Energy

Water utilities and water protection issues

Carbfix

LJÓSLEIÐARINN
REYKJAVIK FIBRE NETWORK

ON POWER

VEITUR

Table of content

Cover photo: Hildur Ingvarsdóttir

RE and subsidiaries' area of operations

Water utilities of Veitur Utilities and ON Power

The water utilities of Veitur Utilities and ON Power and information on the supervisory procedures applied to the water situation in each area, water volume, remarks and improvements. A back-up generator in Jadar in Heidmork, which is powered by diesel oil and oil tanks will be moved out of the water protection area in 2021.

VEITUR'S WATER UTILITIES

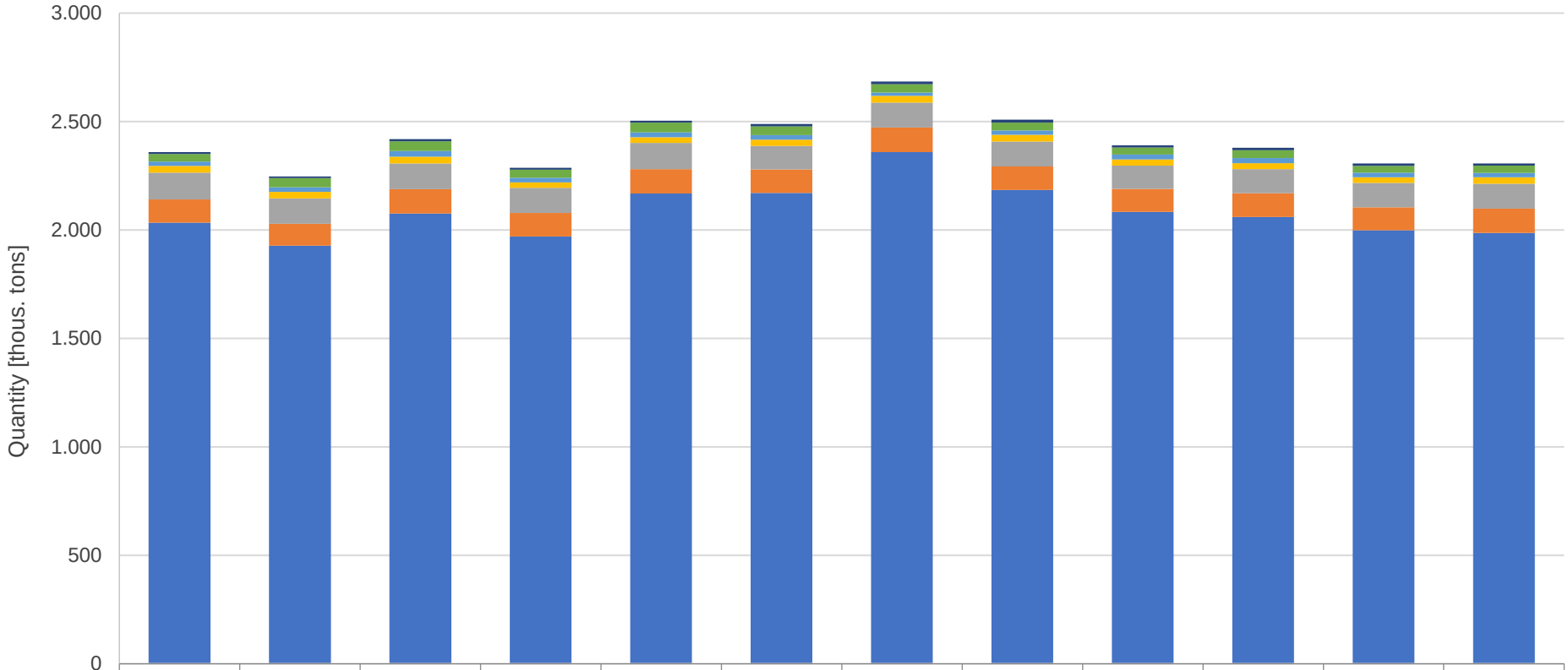
AREA	UTILITY	WATER SUPPLY	MONITORING METHOD	ANNUAL PRODUCTION		COMMENTS	IMPROVEMENTS
				thous. tons	l/s		
Capital area	Reykjavik Seltjarnanes Mosfellsbaer	Gvendarbrunnar, Myllulaekur and Vatnsendakriki	Well sampling	22,308	705	UV purification of water from Gvendarbrunnar, Jadar area og Myllulaekur.	A chemical monitoring unit installed for both main pipelines in Heidmork in the autumn of 2020 and two cell flow monitors were added to the utility. Tests performed in Vatnsendakriki to assess the effects of increased production on nearby water supply areas.
	Alftanes	Vatnsendakriki	Well sampling	311	10	Water purchased from Gardabaer.	
West Iceland	Akranes	Berjadalur, Slaga and Os utility	Overflow	1,305	41	UV water purification.	
	Borgarnes, Bifrost and Munadarnes	Grabrok, Seleyri as back-up for Borgarnes	Well sampling	1,378	44	Due to low water levels and turbidity, previously connected springs at mt. Hafnarfjall were reconnected. UV purification of water from Grabrok and mt. Hafnarfjall.	UV unit installed at springs in mt. Hafnarfjall.
	Grundarfjordur	Grund	Well sampling	253	8		New gate installed at well area and signposts improved. UV unit purchased. Water protection area expanded.
	Hvanneyri	Fossamelar	Overflow	57	2		Well and fence maintenance in 2020. UV unit purchased and the planning of a new pumping station is underway.
	Reykholt and Kleppjarnsreykir	Steindorsstadir	Well sampling	202	6	UV water purification.	
	Stykkisholmur	Svelgsarhraun	Overflow	454	14	UV water purification.	
South Iceland	Hlidarveita	Bjarnarfell	Overflow	121	4	Water purchasing from municipality of Blaskogabyggd possible in case of water shortage.	

ON POWER'S WATER UTILITIES

AREA	UTILITY	WATER SUPPLY	MONITORING METHOD	ANNUAL PRODUCTION		COMMENTS	IMPROVEMENTS
				thous. tons	l/s		
Hengill	Hellisheidi Nesjavellir	Engidalur Gramelur	Well sampling Tank sampling	83,042	2,626	Thermal pollution at Nesjavellir	Actions were taken to substantially reduce thermal pollution at Nesjavellir. Awaiting results.

Water extraction per month in the distribution areas of Veitur Utilities in 2020

Granting everyone access to healthy potable water with negligible outages is one of the prerequisites for a healthy population and flourishing economic activity in a modern society, see the sustainable development goals of the United Nations.



	January	February	March	April	May	June	July	August	September	October	November	December
Hlid utility	8	8	10	9	9	11	12	13	9	11	10	10
Stykkisholmur	35	42	46	38	45	40	39	37	33	36	31	33
Grundarfjordur	20	22	25	20	22	21	15	20	23	23	22	20
Rural Borgarfjordur	31	30	31	26	27	29	31	31	29	28	27	30
Borgarnes	123	118	119	116	121	109	115	114	107	110	111	115
Akranes	107	101	112	108	112	109	113	109	106	110	106	112
Reykjavik	2.034	1.927	2.076	1.970	2.169	2.171	2.359	2.185	2.084	2.060	1.999	1.986

Microbes and chemical composition of potable water in the capital area in 2020

Reykjavik's Department of Environment and Planning (RDEP) regularly collects samples to monitor water quality. Samples are also collected for a complete chemical composition analysis.

Microbe analysis

Microbial properties	Unit	Max. recommended value	Lab	Well VK-01, Vatnsendakriki	Well V-13, Myllulaekur	Well V-05, Jadar area	Well V-10, Jadar area	Well V-12 Myllulaekur	Well VK-05, Vatnsendakriki	RDEP microbial samples
Total number of microbes	Number			1	1	1	1	1	1	117
Total microbes 22°C	Average	100/ml	MATÍS	1	0	0	2	1	2	0.7
	Highest value	100/ml	MATÍS	1	0	0	2	1	2	22
	Lowest value	100/ml	MATÍS	1	0	0	2	1	2	0
Escherichia coli (E. Coli)	Average	0/100 ml	MATÍS	0	0	0	0	0	0	0
	Highest value	0/100 ml	MATÍS	0	0	0	0	0	0	0
	Lowest value	0/100 ml	MATÍS	0	0	0	0	0	0	0
Enterococci	Average	0/100 ml	MATÍS	0	0	0	0	0	0	0
	Highest value	0/100 ml	MATÍS	0	0	0	0	0	0	0
	Lowest value	0/100 ml	MATÍS	0	0	0	0	0	0	0

Chemical composition of potable water

Physiological and chemical properties	Unit	Max. recommended value	Sk.	Lab	Well VK-01, Vatnsendakriki	Well V-13, Myllulaekur	Well V-05, Jadar area	Well V-10, Jadar area	Well V-12 Myllulaekur	Well VK-05, Vatnsendakriki
Sample no.					R20-978-1	R20-978-2	R20-978-3	R20-2523-1	R20-2523-2	R20-2523-3
Sampling date					6.5.2020	6.5.2020	6.5.2020	2.11.2020	2.11.2020	2.11.2020
Colour of sample	mgPt/l			ALS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Turbidity	NTU	adequate	(1)	MATÍS	0.4	0.53	0.56	<0.1	0.24	0.20
Temperature	°C	25		MATÍS	5.1	4.2	4.2	4.3	3.7	3.8
Acidity (pH)	pH unit			MATÍS	8.90	8.90	8.95	9.25	9.20	8.85
Conductivity	µS/cm	2,500		MATÍS	83	85	80	91	92	84
Chloride (Cl)	mg/l	250		ALS	9.86	9.67	8.96	10.6	10.1	9.15
Sulphate (SO_4)	mg/l	250		ALS	2.1	2.04	2.02	2.11	2.04	1.95
Fluoride (F)	mg/l	1.5		ALS	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Nitrate (NO_3)	mg/l	50		ALS	0.239	0.297	0.257	0.217	0.283	0.235
Nitrite (NO_2)	mg/l	0.5		ALS	0.054	0.067	0.058	0.049	0.064	0.053
Ammonium (NH_4-N)	mg/l	0.5		ALS	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026
TOC	mg/l	no abnormal changes		ALS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Calcium (Ca)	mg/l	100	(3)	ALS	4.14	7.88	6.90	8.96	4.99	4.14
Iron (Fe)	mg/l	0.2		ALS	0.01	0.01	0.00	0.00	0.00	0.01
Potassium (K)	mg/l	12	(3)	ALS	0.44	0.79	<0.4	2.48	0.88	0.44
Magnesium (Mg)	mg/l	50	(3)	ALS	1.93	3.71	2.30	4.50	2.90	1.93
Sodium (Na)	mg/l	200		ALS	8.52	12.30	12.00	18.10	6.68	8.52
Sulphur (S)	mg/l		(4)	ALS	0.50	0.77	1.12	3.79	0.85	0.50
Silica (Si)	mg/l		(4)	ALS	7.22	7.29	7.53	18.40	10.70	7.22
Aluminium (Al)	µg/l	200		ALS	2.50	7.79	1.90	85.80	1.17	2.50
Arsenic (As)	µg/l	10		ALS	<0.05	<0.05	<0.05	2.00	<0.05	<0.05

Physiological and chemical properties	Unit	Max. recommended value	Sk.	Lab	Well VK-01, Vatnsendakriki	Well V-13, Myllulaekur	Well V-05, Jadar area	Well V-10, Jadar area	Well V-12 Myllulaekur	Well VK-05, Vatnsendakriki
Boron (B)	µg/l	1,000		ALS	<10	<10	<10	85.70	<10	<10
Barium (Ba)	µg/l	700	(3)	ALS	0.08	0.04	0.04	0.56	0.57	0.08
Cadmium (Cd)	µg/l	5.0		ALS	<0.002	0.00	<0.002	0.06	<0.002	<0.002
Cobalt (Co)	µg/l		(4)	ALS	0.01	0.01	0.01	<0.005	<0.005	0.01
Chromium (Cr)	µg/l	50		ALS	0.22	0.48	0.48	0.59	0.46	0.22
Copper (Cu)	µg/l	2,000		ALS	0.94	1.35	0.47	1.07	0.53	0.94
Mercury (Hg)	µg/l	1.0		ALS	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Manganese (Mn)	µg/l	50		ALS	0.23	0.18	0.31	0.06	0.10	0.23
Molybdenum (Mo)	µg/l		(4)	ALS	0.06	0.07	0.07	0.44	0.19	0.06
Nickel (Ni)	µg/l	20		ALS	0.08	0.12	0.61	0.73	0.16	0.08
Phosphorus (P)	µg/l	5,000	(3)	ALS	3.25	24.60	23.60	49.00	44.30	3.25
Lead (Pb)	µg/l	10		ALS	0.24	0.10	0.07	0.14	0.02	0.24
Antimon (Sb)	µg/l	5.0		ALS	<0.01	<0.01	<0.01	0.05	<0.01	<0.01
Selen (Se)	µg/l	10		ALS	<0.5	<0.5	<0.5	1.31	<0.5	<0.5
Strontium (Sr)	µg/l		(4)	ALS	5.87	4.07	2.48	17.70	10.70	5.87
Sink (Zn)	µg/l	3,000	(3)	ALS	2.02	38.90	3.02	14.80	5.70	2.02
Vanadium (V)	µg/l			ALS	4.16	4.22	4.30	20.50	9.06	4.16
Benzene	µg/l	1.0		ALS	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/l			ALS	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
m,p-xylene	µg/l			ALS	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
o-xylene	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Sum xylene	µg/l			ALS	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Dichloromethane	µg/l			ALS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1 - dichloroethane	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2 - dichloroethane	µg/l	3.0		ALS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Physiological and chemical properties	Unit	Max. recommended value	Sk.	Lab	Well VK-01, Vatnsendakriki	Well V-13, Myllulaekur	Well V-05, Jadar area	Well V-10, Jadar area	Well V-12 Myllulaekur	Well VK-05, Vatnsendakriki
Trans 1,2 - dichloroethane	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Cis 1,2 - dichloroethane	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2 - dichloropropane	µg/l			ALS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloromethane	µg/l	100		ALS	<0.30	<0.30	<0.30	<0.10	<0.30	<0.30
Tetrachloromethane	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,1 - trichloroethane	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2 - trichloroethane	µg/l			ALS	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane	µg/l	10	(2)	ALS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethane	µg/l	10	(2)	ALS	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Vinyl chloride	µg/l	0.5		ALS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1 - dichloroethane	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Naphtalen	µg/l			ALS	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphtylene	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Acenaphtene	µg/l			ALS	<0.0070	<0.0070	<0.0070	<0.0070	<0.0070	<0.0070
Fluorene	µg/l			ALS	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	µg/l			ALS	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Anthracene	µg/l			ALS	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoroathene	µg/l			ALS	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Pyrene	µg/l			ALS	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benz(a)anthracene	µg/l			ALS	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Chrysene	µg/l			ALS	<0.0070	<0.0070	<0.0070	<0.0070	<0.0070	<0.0070
Benzo(b)fluoranthene	µg/l	0.1	(5)	ALS	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Benzo(k)fluoranthene	µg/l	0.1	(5)	ALS	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Benzo(a)pyrene	µg/l	0.01		ALS	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Dibenzo(ah)anthracene	µg/l			ALS	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Benzo(ghi)perylene	µg/l	0.1	(5)	ALS	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Indeno(123-cd)pyrene	µg/l		(5)	ALS	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Physiological and chemical properties	Unit	Max. recommended value	Sk.	Lab	Well VK-01, Vatnsendakriki	Well V-13, Myllulaekur	Well V-05, Jadar area	Well V-10, Jadar area	Well V-12 Myllulaekur	Well VK-05, Vatnsendakriki
Sum PAH 16 (EPA)	µg/l			ALS	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Sum PAH cancerogene	µg/l			ALS	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
Sum PAH other	µg/l			ALS	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Sum PAH 4	µg/l			ALS	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060
Sum PAH L	µg/l			ALS	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Sum PAH M	µg/l			ALS	<0.033	<0.033	<0.033	<0.033	<0.033	<0.033
Sum PAH H	µg/l			ALS	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013
Tribromomethane	µg/l			ALS	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Bromodichloromethane	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Sum trihalomethane	µg/l			ALS	<0.35	<0.35	<0.35	<0.25	<0.35	<0.35
Cyanide (CN total)	µg/l	50		ALS	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001

Commentary:

(1) Adequate for consumption and no uncharacteristic changes

(2) Maximum value for sum of thrichloroethane and tetrachloroethene

(3) Maximum value in older Icelandic regulations 319/1995 (void)

(4) Maximum value not in Icelandic regulations

(5) Maximum value for the sum of the following substances: benzo(b)fluoranthene, benzo(k) fluoranthene, benzo(ghi)perylene, indeno(123cd)pyrene

Laboratories:

MATÍS: Matís ohf, Rannsóknastofa

ALS: ALS Scandinavia AB (Sweden)

Microbes and chemical composition of potable water in West and South Iceland in 2020

Local health departments in each area regularly collect samples to monitor the quality of water. Samples are also collected for complete chemical composition and microbial analysis.

Microbe analysis

Microbial properties	Unit	Max. recommended value	Lab	Steindorsstadir	Hvanneyri	Akranes	Nesjavellir	Hellisheidi
Total number of microbes	Number			2	3	8	1	3
Total microbes 22°C	Average	100/ml	MATÍS	0	0	0.1	0	1.7
	Highest value	100/ml	MATÍS	0	0	1	0	3
	Lowest value	100/ml	MATÍS	0	0	0	0	1
Escherichia coli (E. Coli)	Average	0/100 ml	MATÍS	0	0	0	0	0
	Highest value	0/100 ml	MATÍS	0	0	0	0	0
	Lowest value	0/100 ml	MATÍS	0	0	0	0	0
Enterococci	Average	0/100 ml	MATÍS	0	0	0	0	0
	Highest value	0/100 ml	MATÍS	0	0	0	0	0
	Lowest value	0/100 ml	MATÍS	0	0	0	0	0

Chemical composition of potable water

Physiological and chemical properties	Unit	Max. recommended value	Sk.	Lab	Steindorsstadir	Hvanneyri	Akranes	Nesjavellir	Hellisheidi
Sample no.					R20-1229-4	R20-1229-5	R20-1229-6	R20-1431-1	R20-1300-1
Sampling date					8.6.2020	8.6.2020	9.6.2020	30.6.2020	15.6.2020
Colour of sample	mgPt/l			ALS	2.30	<2.0	<2.0	<2.0	<2.0
Turbidity	NTU	adequate	(1)	MATÍS	0.1	0.11	0.13	-	-
Temperature	°C	25		MATÍS	6.8	11.2	5.6	2.8	6.0
Acidity (pH)	pH unit			MATÍS	7.35	8.10	7.35	7.95	9.00
Conductivity	µS/cm	2500		MATÍS	75	130	110	160	160
Chloride (Cl)	mg/l	250		ALS	7.66	11.50	14.00	13.20	6.90
Sulphate (SO_4)	mg/l	250		ALS	1.44	2.12	3.40	10.40	2.98
Fluoride (F)	mg/l	1.5		ALS	<0.200	<0.200	<0.200	<0.200	<0.200
Nitrate (NO_3)	mg/l	50		ALS	0.08	1.21	0.47	0.20	<0.022
Nitrite (NO_2)	mg/l	0.5		ALS	0.02	0.27	0.11	0.04	<0.005
Ammonium (NH_4-N)	mg/l	0.5		ALS	<0.026	<0.026	<0.026	<0.026	<0.026
TOC	mg/l	no abnormal changes		ALS	<0.50	<0.50	<0.50	<0.50	<0.50
Calcium (Ca)	mg/l	100	(3)	ALS	4.14	7.88	6.90	8.96	4.99
Iron (Fe)	mg/l	0.2		ALS	0.01	0.01	0.00	0.00	0.00
Potassium (K)	mg/l	12	(3)	ALS	0.44	0.79	<0.4	2.48	0.88
Magnesium (Mg)	mg/l	50	(3)	ALS	1.93	3.71	2.30	4.50	2.90
Sodium (Na)	mg/l	200		ALS	8.52	12.30	12.00	18.10	6.68
Sulphur (S)	mg/l		(4)	ALS	0.50	0.77	1.12	3.79	0.85
Silica (Si)	mg/l		(4)	ALS	7.22	7.29	7.53	18.40	10.70
Aluminium (Al)	µg/l	200		ALS	2.50	7.79	1.90	85.80	1.17
Arsen (As)	µg/l	10		ALS	<0.05	<0.05	<0.05	2.00	<0.05

Physiological and chemical properties	Unit	Max. recommended value	Sk.	Lab	Steindorsstadir	Hvanneyri	Akranes	Nesjavellir	Hellisheidi
Boron (B)	µg/l	1,000		ALS	<10	<10	<10	85.70	<10
Barium (Ba)	µg/l	700	(3)	ALS	0.08	0.04	0.04	0.56	0.57
Cadmium (Cd)	µg/l	5.0		ALS	<0.002	0.00	<0.002	0.06	<0.002
Cobalt (Co)	µg/l		(4)	ALS	0.01	0.01	0.01	<0.005	<0.005
Chromium (Cr)	µg/l	50		ALS	0.22	0.48	0.48	0.59	0.46
Copper (Cu)	µg/l	2,000		ALS	0.94	1.35	0.47	1.07	0.53
Mercury (Hg)	µg/l	1.0		ALS	<0.002	<0.002	<0.002	<0.002	<0.002
Manganese (Mn)	µg/l	50		ALS	0.23	0.18	0.31	0.06	0.10
Molybdenum (Mo)	µg/l		(4)	ALS	0.06	0.07	0.07	0.44	0.19
Nickel (Ni)	µg/l	20		ALS	0.08	0.12	0.61	0.73	0.16
Phosphorus (P)	µg/l	5,000	(3)	ALS	3.25	24.60	23.60	49.00	44.30
Lead (Pb)	µg/l	10		ALS	0.24	0.10	0.07	0.14	0.02
Antimon (Sb)	µg/l	5.0		ALS	<0.01	<0.01	<0.01	0.05	<0.01
Selen (Se)	µg/l	10		ALS	<0.5	<0.5	<0.5	1.31	<0.5
Strontium (Sr)	µg/l		(4)	ALS	5.87	4.07	2.48	17.70	10.70
Sink (Zn)	µg/l	3,000	(3)	ALS	2.02	38.90	3.02	14.80	5.70
Vanadium (V)	µg/l			ALS	4.16	4.22	4.30	20.50	9.06
Benzene	µg/l	1.0		ALS	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/l			ALS	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10
m,p-xylene	µg/l			ALS	<0.20	<0.20	<0.20	<0.20	<0.20
o-xylene	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10
Sum xylene	µg/l			ALS	<0.15	<0.15	<0.15	<0.15	<0.15
Dichloromethane	µg/l			ALS	<2.0	<2.0	<2.0	<2.0	<2.0
1,1 - dichloroethane	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10
1,2 - dichloroethane	µg/l	3.0		ALS	<0.50	<0.50	<0.50	<0.50	<0.50

Physiological and chemical properties	Unit	Max. recommended value	Sk.	Lab	Steindorsstadir	Hvanneyri	Akranes	Nesjavellir	Hellisheidi
Trans 1,2 - dichloroethane	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10
Cis 1,2 - dichloroethane	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10
1,2 - dichloropropane	µg/l			ALS	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloromethane	µg/l	100		ALS	<0.30	<0.30	<0.30	<0.30	<0.30
Tetrachloromethane	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,1 - trichloroethane	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2 - trichloroethane	µg/l			ALS	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane	µg/l	10	(2)	ALS	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethane	µg/l	10	(2)	ALS	<0.20	<0.20	<0.20	<0.20	<0.20
Vinyl chloride	µg/l	0.5		ALS	<1.0	<1.0	<1.0	<1.0	<1.0
1,1 - dichloroethane	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10
Naphtalen	µg/l			ALS	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphtylene	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10
Acenaphtene	µg/l			ALS	<0.0070	<0.0070	<0.0070	<0.0070	<0.0070
Fluorene	µg/l			ALS	<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	µg/l			ALS	<0.040	<0.040	<0.040	<0.040	<0.040
Anthracene	µg/l			ALS	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoroathene	µg/l			ALS	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Pyrene	µg/l			ALS	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benz(a)anthracene	µg/l			ALS	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Chrysene	µg/l			ALS	<0.0070	<0.0070	<0.0070	<0.0070	<0.0070
Benzo(b)fluoranthene	µg/l	0.1	(5)	ALS	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Benzo(k)fluoranthene	µg/l	0.1	(5)	ALS	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Benzo(a)pyrene	µg/l	0.01		ALS	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Dibenzo(ah)anthracene	µg/l			ALS	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Benzo(ghi)perylene	µg/l	0.1	(5)	ALS	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Indeno(123-cd)pyrene	µg/l		(5)	ALS	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Physiological and chemical properties	Unit	Max. recommended value	Sk.	Lab	Steindorsstadir	Hvanneyri	Akranes	Nesjavellir	Hellisheidi
Sum PAH 16 (EPA)	µg/l			ALS	<0.20	<0.20	<0.20	<0.20	<0.20
Sum PAH cancerogene	µg/l			ALS	<0.012	<0.012	<0.012	<0.012	<0.012
Sum PAH other	µg/l			ALS	<0.20	<0.20	<0.20	<0.20	<0.20
Sum PAH 4	µg/l			ALS	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060
Sum PAH L	µg/l			ALS	<0.20	<0.20	<0.20	<0.20	<0.20
Sum PAH M	µg/l			ALS	<0.033	<0.033	<0.033	<0.033	<0.033
Sum PAH H	µg/l			ALS	<0.013	<0.013	<0.013	<0.013	<0.013
Tribromomethane	µg/l			ALS	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10
Bromodichloromethane	µg/l			ALS	<0.10	<0.10	<0.10	<0.10	<0.10
Sum trihalomethane	µg/l			ALS	<0.35	<0.35	<0.35	<0.35	<0.35
Cyanide (CN total)	µg/l	50		ALS	<0.005	<0.005	<0.005	<0.001	<0.005

Commentary:

(1) Adequate for consumption and no uncharacteristic changes

(2) Maximum value for sum of thrichloroethane and tetrachloroethene

(3) Maximum value in older Icelandic regulations 319/1995 (void)

(4) Maximum value not in Icelandic regulations

(5) Maximum value for the sum of the following substances: benzo(b)fluoranthene, benzo(k) fluoranthene, benzo(ghi)perylene, indeno(123cd)pyrene

Laboratories:

MATÍS: Matís ohf, Rannsóknastofa

ALS: ALS Scandinavia AB (Sweden)

Transport of hazardous substances

The quantity of gasoline and sludge transported through the capital area's water protection areas under supervision 2017-2020 is marked by *. Quantity of asbestos transported for landfilling in Fiflholt, West Iceland and sludge in West Iceland for Veitur Utilities. Quantity of gasoline, chlorine and sludge transported for ON Power's geothermal power plants in the Hengill area.

Site	Category	Unit	2017	2018	2019	2020
Nesjavellir power plant	Oil	liters	2,500	1,300		1,300
Hellisheidi power plant	Oil	liters				1,000
Blafjoll, ski area*	Oil	liters	54,000	50,000	40,000	40,000
Ellidavatn, forestry*	Oil	liters	800	400	1,400	1,400
Vatnsendakrikar*	Oil	liters	3,700			
Total oil		**liters**	**61,000**	**51,700**	**41,400**	**43,700**
Blafjoll, ski area*	Gasoline	liters	2,700	1,000	2,000	2,000
Total gasoline		**liters**	**2,700**	**1,000**	**2,000**	**2,000**
Hellisheidi power plant	Sludge	liters	36,000	14,000	36,000	36,000
Nesjavellir power plant	Sludge	liters	65,000	40,000	29,000	60,000
West Iceland	Sludge	liters	185,000	119,000	108,000	280,000
Ellidavatn, forestry*	Sludge	liters				
Gvendarbrunnar*	Sludge	liters		2,500	2,000	2,000
Vatnsendakrikar*	Sludge	liters	5,800	5,900		
Water tank T-4*	Sludge	liters		6,500		
Total sludge		**liters**	**291,800**	**187,900**	**175,000**	**378,000**
Hellisheidi power plant	Chlorine	liters	14,600	14,600	18,000	12,000
Nesjavellir power plant	Chlorine	liters	6,700	6,700	5,000	5,000
Total chlorine		**liters**	**21,300**	**21,300**	**23,000**	**14,000**
West Iceland	Asbestos	kg	405,000	323,000	196,000	554,000
Total asbestos		**kg**	**405,000**	**323,000**	**196,000**	**554,000**

* The water protection supervisor escorted 12 transports of hazardous substances in 2020.