

Reykjavík Energy

Sewage treatment, overflows and sea water quality 2024



Table of contents

OR and subsidiaries' area of operations	1
Sea water quality along Reykjavik's coastline and on the periphery of dilution areas in Faxafloi bay	2
Gæði sjávar við ströndina á Vesturlandi.....	2
Chemicals and trace elements from sewage treatment plants in Reykjavik 2024.....	3
Release from Veitur utilities' sewerage systems	4
Release via overflows in Reykjavik 2022-2024	4
Emergency overflow activity in Reykjavik 2022-2024.....	5
Release via overflows in West Iceland 2024	6

Cover photo: Gretar Ívarsson

OR and subsidiaries' area of operations



Sea water quality along Reykjavik's coastline and on the periphery of dilution areas in Faxafloi bay

The percentage (%) of samples below limits, i.e., less than 100 in a 100 ml sample at the coast by Reykjavik in 2018-2024 and less than 1000 in a 100 ml sample at the periphery of dilution areas for the period 2018-2021.

Samples	Heat-tolerant microbes		2018	2019	2020	2021	2022	2023	2024
At the coast and by the discharge point									
RDEP and Veitur	Faecal coliforms	%	87	90	93	87	95	83	78
Utilities	Enterococci	%	96	99	97	93	99	93	95
At the periphery of dilution areas									
Veitur Utilities*	Faecal coliforms	%	97	100	100	100	-	-	-
	Enterococci	%	100	100	100	100	-	-	-

RDEP: Reykjavik's Department of Environment and Planning

*Veitur Utilities discontinued sampling at the dilution area periphery in 2021 as it is not required in regulations.

Gæði sjávar við ströndina á Vesturlandi

No samples were collected in 2024. Regulations require samples to be collected every 4 years when sampling occurs monthly. Last samples were collected in 2022-2023. The table below show the ratio of samples below limits (100 microbes in 100 mL).

Samples	Heat-tolerant microbes		2021	2022	2023	2024
Sea quality at Akranes						
Veitur Utilities	Faecal coliforms	%	86	85	83	-
	Enterococci	%	93	96	100	-
Sea quality at Borgarnes						
Veitur Utilities	Faecal coliforms	%		96	100	-
	Enterococci	%		97	100	-

Chemicals and trace elements from sewage treatment plants in Reykjavik 2024

Discharge of pollutants (mg/l) from sewage treatment plants in Reykjavik in 2024. The average flow in Klettagardar was 1,708 l/sec and in Ananaust 1,170 l/sec. Calculations are based on results of chemical and trace element analysis from treated sewage samples, collected four times a year for nitrogen and phosphorus analysis and twice a year for trace element analysis.

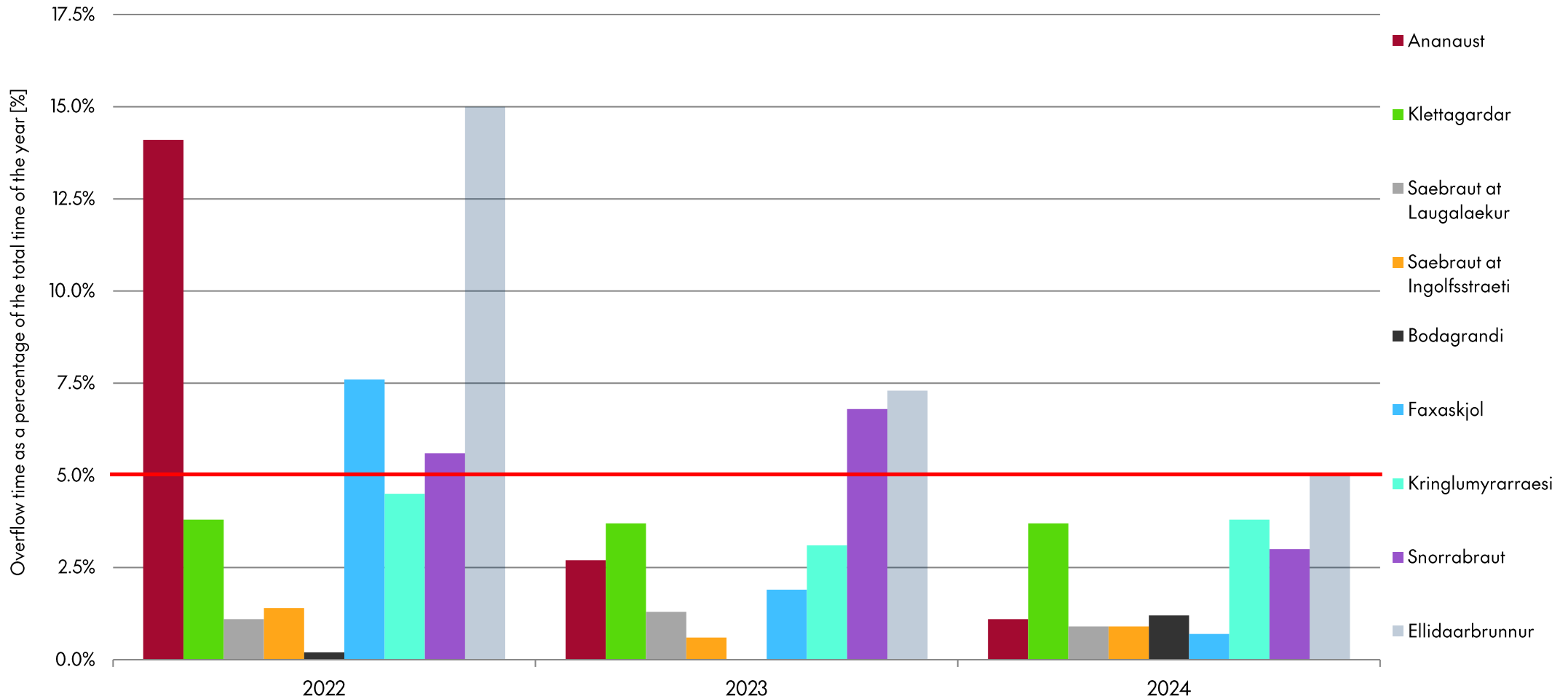
	Spring mg/l	Summer mg/l	Autumn mg/l	Winter mg/l	Average mg/l
Klettagardar					
Total nitrogen (N)	12.7	15.2	11.7	10.3	12.4
Total phosphorus (P)	1.8	1.7	1.5	1.3	1.6
Arsenic (As)	0.0014		0.0016		0.0015
Cadmium (Cd)	0.0001		<0.00005		Below or near the detection limit
Chromium (Cr)	0.0028		0.0019		0.0024
Copper (Cu)	0.0091		0.0140		0.0116
Mercury (Hg)	<0.00002		<0.00002		Below the detection limit
Nickel (Ni)	0.0032		0.0032		0.0032
Lead (Pb)	0.0010		0.0011		0.0010
Silver (Ag)	<0.0005		<0.0005		Below the detection limit
Zinc (Zn)	0.08		0.06		0.07
Ananaust					
Total nitrogen (N)	20.7	15.7	14.4	11.8	14.6
Total phosphorus (P)	2.7	2.2	2.1	1.6	2.1
Arsenic (As)	0.0014		0.00162		0.0015
Cadmium (Cd)	0.0001		<0.00005		Below or near the detection limit
Chromium (Cr)	0.0020		0.00163		0.002
Copper (Cu)	0.0082		0.00648		0.007
Mercury (Hg)	0.0000		0.00003		0.00003
Nickel (Ni)	0.0023		0.00179		0.00210
Lead (Pb)	0.0009		<0.0005		Below or near the detection limit
Silver (Ag)	<0.0005		<0.0005		Below the detection limit
Zinc (Zn)	0.057		0.055		0.056

- When both samples collected are below the detection limits, the column "mean value" states "below the detection limit".

Release from Veitur utilities' sewerage systems

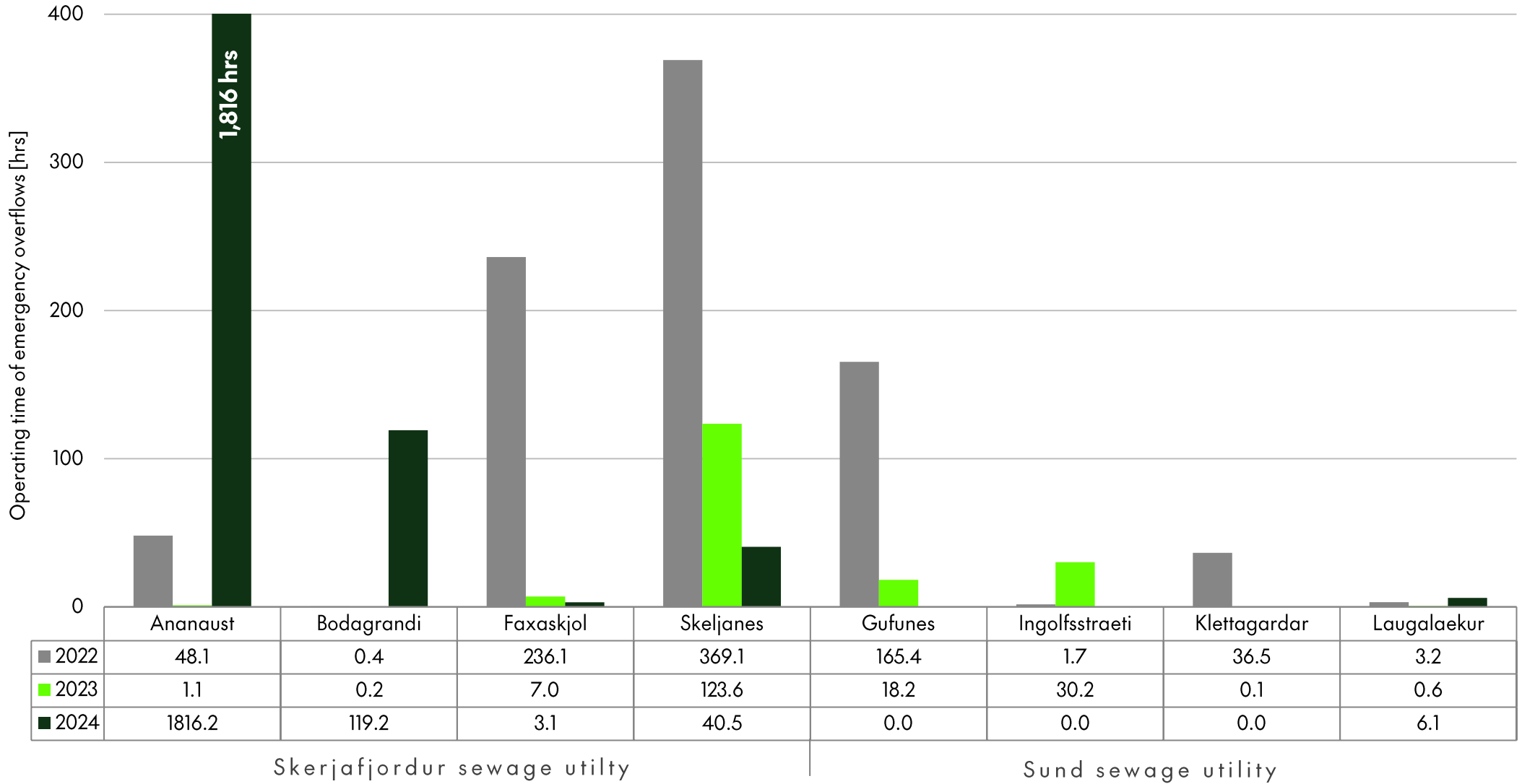
Release via overflows in Reykjavik 2022-2024

According to regulation no. 798/1999 on Sewerage systems and Sewage, overflow in the sewerage system may be active for up to 5% of the time of the year, or when the sewage mixed with hot water from district heating utilities or rainwater is at least on a ratio of 1:5.



Major maintenance in the first half of 2024 at Ananaust extended the time of emergency overflow activity at the Ananaust sewage treatment plant.

Emergency overflow activity in Reykjavik 2022-2024



Release via overflows in West Iceland 2024

In 2024 the discharge of wastewater via overflows in West Iceland was within Veitur Utilities' established limits. According to regulation no. 798/1999 on Sewerage systems and Sewage, overflow in the sewerage system may be active for up to 5% of the time of the year, or when the sewage mixed with hot water from district heating utilities or rainwater is at least on a ratio of 1:5.

