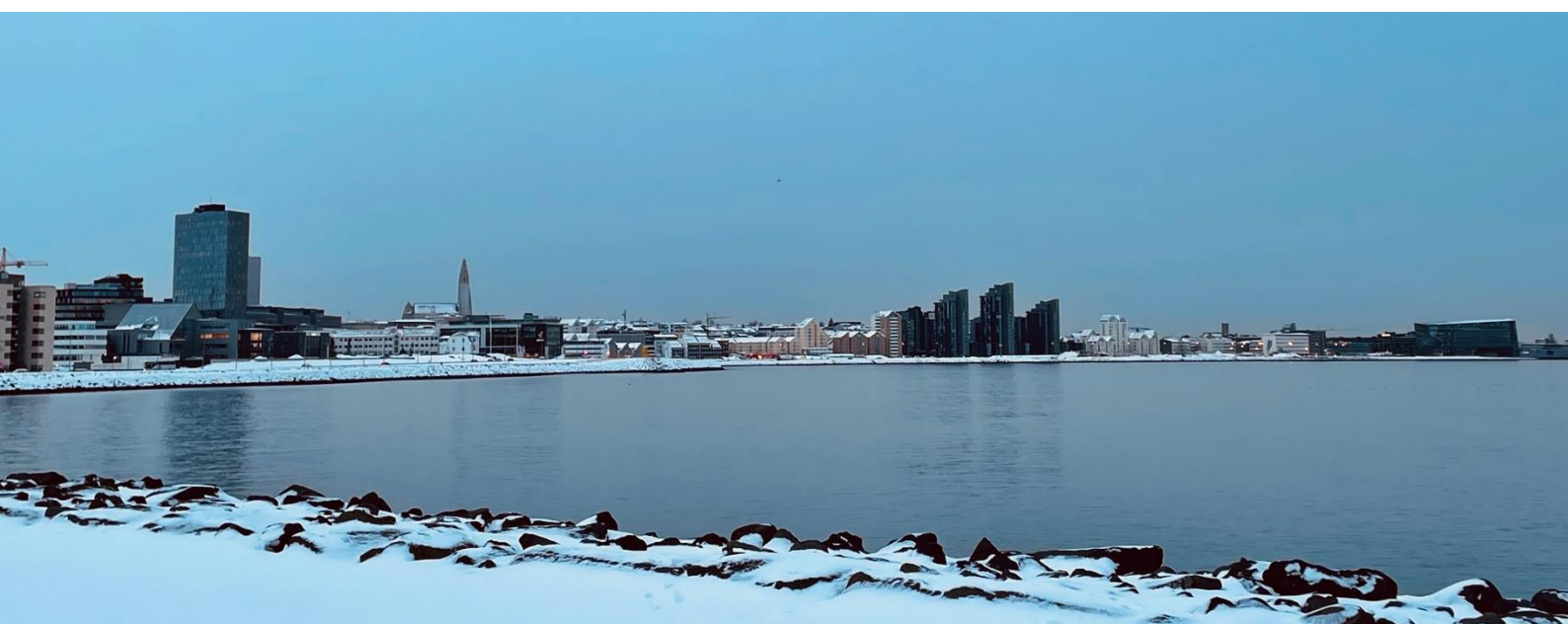


# OR Annual report 2021

## Appendices



### Sewage treatment, overflows and sea water quality



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Cover photo: Þorsteinn Þorgeirsson

# OR and subsidiaries' area of operations



## Sea water quality along Reykjavík'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 and less than 1000 in a 100 ml sample at the periphery of dilution areas for the period 2015-2021. In 2021 sample analysis revealed that over 90% of samples were below the permissible values.

Samples	Heat-tolerant microbes		2015	2016	2017	2018	2019	2020	2021
<b>At the coast and by the discharge point</b>									
RDEP and	Faecal coliforms	%	92	85	81	87	90	93	87
Veitur Utilities	Enterococci	%	96	95	96	96	99	97	93
<b>At the periphery of dilution areas</b>									
Veitur Utilities	Faecal coliforms	%	97	100	100	97	100	100	100
	Enterococci	%	100	100	100	100	100	100	100

RDEP: Reykjavik's Department of Environment and Planning

## Sea water quality along Akranes' coastline

In 2021, from February to October, additional samples were collected along Akranes' coastline. 71 sample were collected for each category of microbes.

Samples	Heat-tolerant microbes		2021
<b>At the coast</b>			
Veitur Utilities	Faecal coliforms	%	86
	Enterococci	%	93

# Chemicals and trace elements from sewage treatment plants in Reykjavik 2021

Discharge of pollutants (mg/l) from sewage treatment plants in Reykjavik in 2020. The average flow in Klettagardar was 1,452 l/sec and in Ananaust 1,094 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.

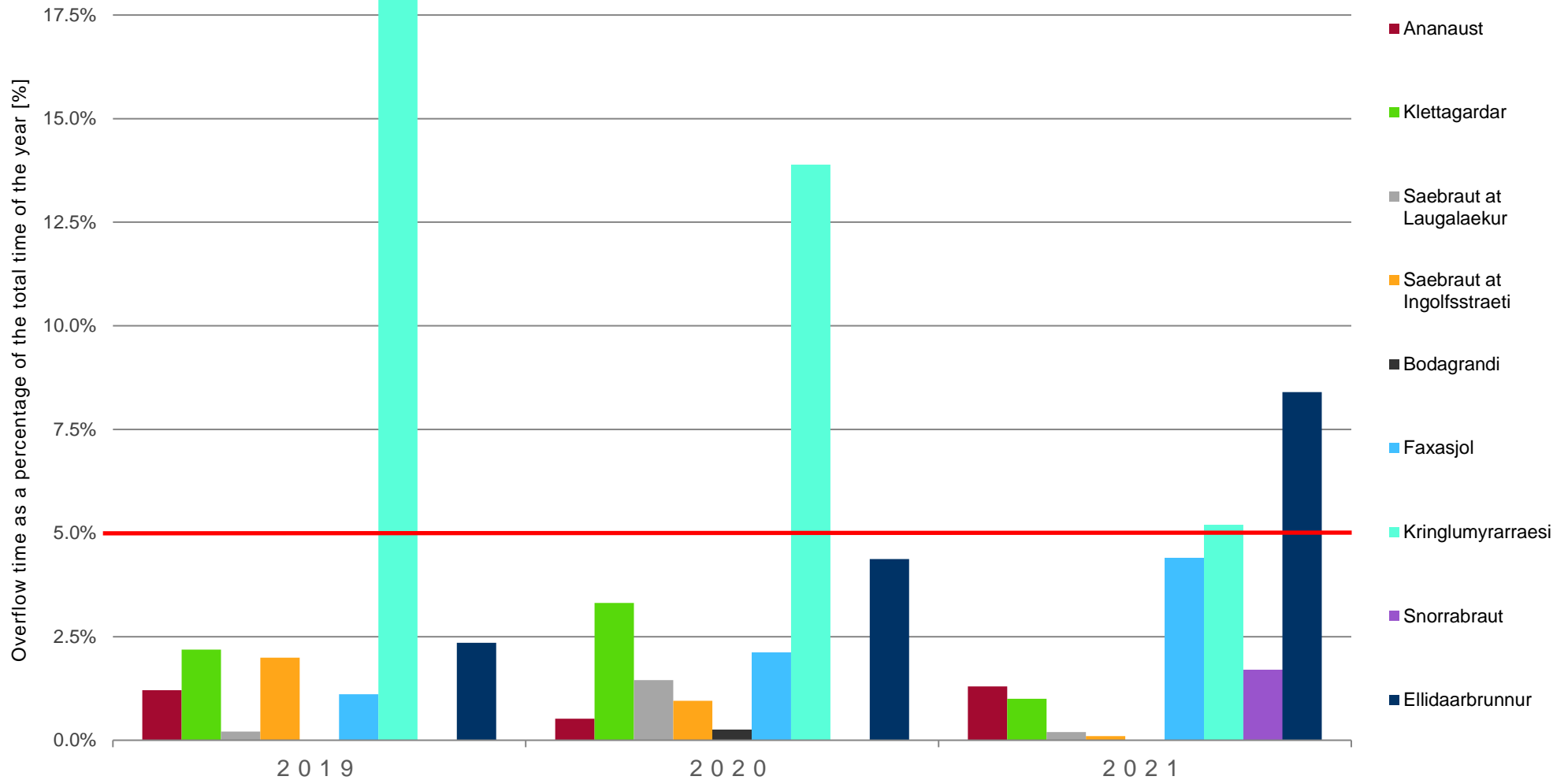
	March mg/l	June mg/l	September mg/l	December mg/l	Average mg/l
<b>Klettagardar</b>					
Total nitrogen (N)	7.1	10.8	11.8	6.3	9.9
Total phosphorus (P)	0.9	0.8	1.2	0.9	1.1
Arsenic (As)	<0.05			<0.05	Below the detection limit
Cadmium (Cd)	<0.001			<0.001	Below the detection limit
Chromium (Cr)	<0.005			<0.005	Below the detection limit
Copper (Cu)	<0.005			0.0113	Below or near the detection limit
Mercury (Hg)	<0.0005			<0.0005	Below the detection limit
Nickel (Ni)	<0.005			<0.005	Below the detection limit
Lead (Pb)	<0.005			<0.005	Below the detection limit
Silver (Ag)	<0.01			<0.01	Below the detection limit
Zinc (Zn)	0.03			0.06	0.05
<b>Ananaust</b>					
Total nitrogen (N)	12.0	15.8	14	9.0	12.5
Total phosphorus (P)	1.6	2.0	1.84	1.4	1.8
Arsenic (As)	<0,05			<0,05	Below the detection limit
Cadmium (Cd)	<0,001			<0,001	Below the detection limit
Chromium (Cr)	<0,005			<0,005	Below the detection limit
Copper (Cu)	<0,005			0.01	Below or near the detection limit
Mercury (Hg)	<0,0005			<0,0005	Below the detection limit
Nickel (Ni)	<0,005			<0,005	Below the detection limit
Lead (Pb)	<0,005			<0,005	Below the detection limit
Silfur (Ag)	<0,01			<0,01	Below the detection limit
Zinc (Zn)	0.050			0.04	0.046

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

# Release from Veitur utilities' sewerage systems

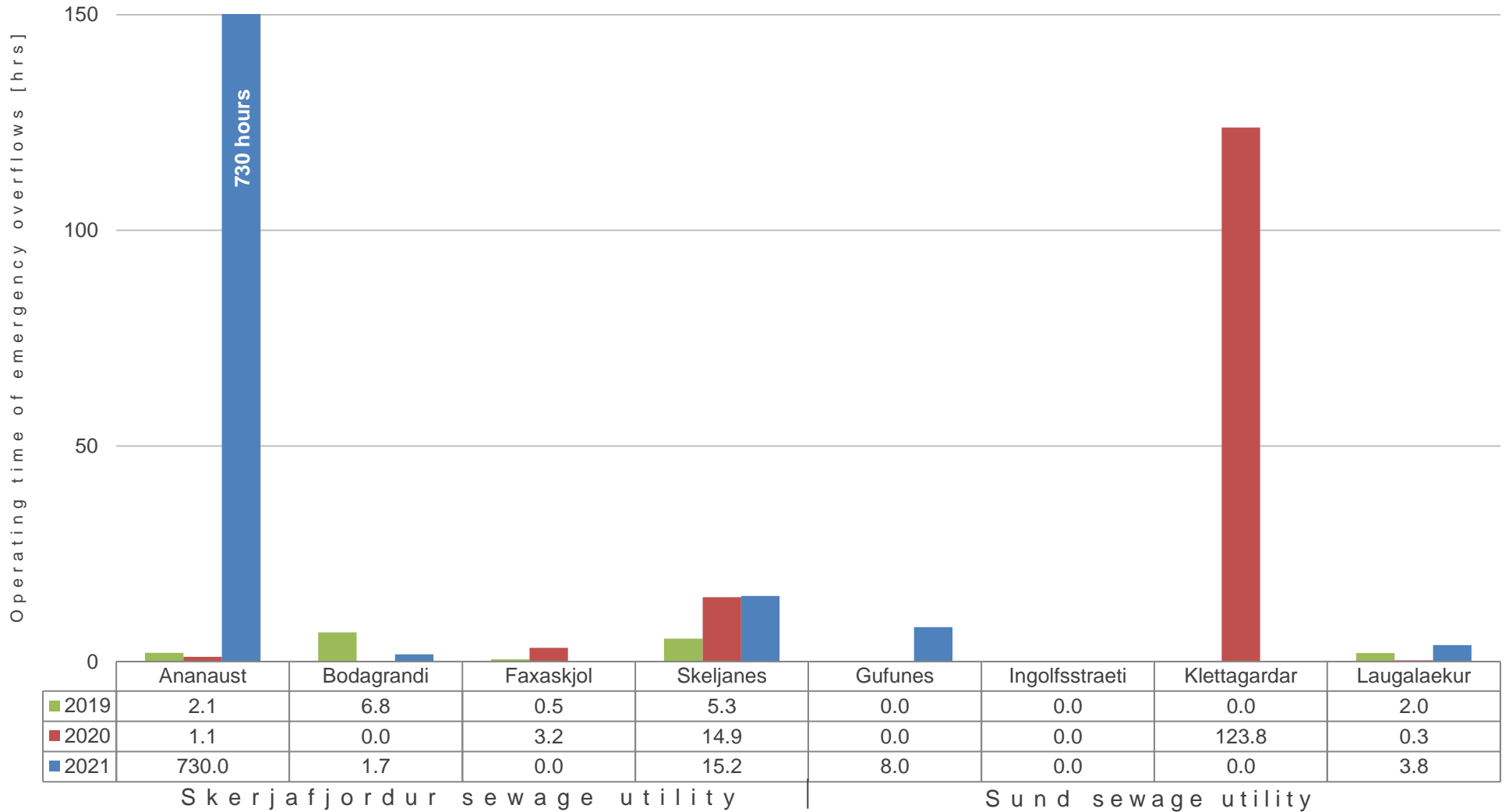
According to regulation no. 798/1999 on Sewerage systems and Sewage, overflow in the sewerage system may be active for up to 5% of the time of the year, or when the sewage mixed with hot water from district heating utilities or rainwater is at least on a ratio of 1:5.

## Release via overflows in Reykjavik 2018-2021



Major maintenance in October and November 2021 at the Klettagardar sewage treatment plant caused emergency overflows to be active for 730 hours during the year. Emergency overflows at Faxaskjol, Klettagardar and Ingolfsstraeti were inactive throughout the year

## Emergency overflow activity in Reykjavik 2019-2021



In 2020, the discharge of wastewater via overflows in West Iceland was within Veitur Utilities' established limits, apart from Thorsteinsgata in Borgarnes. 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.

## Release via overflows in West Iceland 2021

