

The Results of Radioactive Material Monitoring of the Surface Water Bodies within Gunma Prefecture

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Water Environment Division,
Environment Management Bureau,
Ministry of the Environment
Direct line: 03-5521-8316
Switchboard: 03-3581-3351
Director: Nobuo Yoshida (ext. 6610)
Deputy Director: Tetsuo Furuta (ext. 6614)
Coordinator: Hiroaki Hase (ext. 6628)

In accordance with the Comprehensive Radiation Monitoring Plan determined by the Monitoring Coordination Meeting, the Ministry of the Environment (MOE) is continuing to monitor radioactive materials in water environments (surface water bodies (rivers, lakes, headwaters, and coasts), etc.).

Samples taken from the surface water bodies of Gunma Prefecture during the period of November 23-December 16 have been measured as part of MOE's efforts to monitor radioactive materials; the results have recently been compiled and are released here.

*The following monitoring results have already been released: Fukushima Prefecture (September 15-October 14 samples: Released November 15), Ibaraki Prefecture (August 30-October 8 samples: Released December 2), Miyagi Prefecture (October 3-November 7 samples: Released December 16), Tochigi Prefecture (October 5-24 samples: Released December 16), Yamagata Prefecture (October 24-27 samples: Released December 22), Chiba Prefecture (October 31-November 4 samples: Released December 22)

1. Survey Overview

(1) Survey Locations

69 environmental reference points, etc. in the surface water bodies within Gunma Prefecture
(Rivers: 50 locations, Lakes and headwaters: 19 locations)

(2) Survey Method

- Measurement of concentrations of radioactive materials (radioactive iodine (I-131), radioactive cesium (Cs-134 and Cs-137)) in water and sediment
- Measurement of concentrations of radioactive materials and spatial dose-rate in soil in the surrounding environment of water and sediment sample collection points (river terraces, etc.)

2. Outline of Results

(1) Water Quality (Lower detection limit: 1Bq/L)

- Radioactive iodine (I-131) Not detectable (ND) at any location
- Radioactive cesium (Cs-134, Cs-137) ND at any location

*“Regulatory Guide: Emergency Preparedness for Nuclear Facilities (Nuclear Safety Commission)”
Standards for Restrictions on the Intake of Food and Drink (Drinking Water)

Radioactive iodine (I-131): 300Bq/kg or more

Radioactive cesium (total for Cs-134 + Cs-137): 200Bq/kg or more

(2) Sediment

- Radioactive iodine (I-131) ND at any location (Lower detection limit: 30Bq/kg (dried mud))
- Radioactive cesium

(Rivers)

Cs-134: ND-160Bq/kg (dried mud) (Lower detection limit: 10Bq/kg (dried mud))

Cs-137: ND-220Bq/kg (dried mud) (Lower detection limit: 10Bq/kg (dried mud))

(Lakes and headwaters)

Cs-134: ND-2,000Bq/kg (dried mud) (Lower detection limit: 11-41Bq/kg (dried mud))

Cs-137: ND-2,600Bq/kg (dried mud) (Lower detection limit: 21-68Bq/kg (dried mud))

(3) Surrounding Environment

- Radioactive iodine (I-131): ND at any location (Lower detection limit: 30Bq/kg (dry))

- Radioactive cesium

(Rivers)

Cs-134: 8-1,600Bq/kg (dry)

Cs-137: 22-2,100Bq/kg (dry)

(Lakes and headwaters)

Cs-134: 40-3,100Bq/kg (dry)

Cs-137: 55-4,000Bq/kg (dry)

- Spatial dose

(Rivers) 0.06-0.43 μ Sv/h

(Lakes and headwaters) 0.06-0.37 μ Sv/h

(Annex for details)

(Map attached)

Future Plans

In coordination with relevant organizations, MOE intends to continue to measure radioactive materials in water, sediment, etc. in rivers, lakes, etc. in the following prefectures: Fukushima, Miyagi, Yamagata (some parts), Iwate (some parts), Ibaraki, Tochigi, Gunma and Chiba (some parts).

○River: Water Quality Monitoring Results

(Annex)

No.	Sampling point				Sampling date	Weather	Air temperature ℃	Full depth m	General items						Concentration of radioactive material Bq/L			Remarks
	Water body	Point	Municipality	Water temperature ℃					Sampling depth m	Transparency cm	Electrical conductivity mS/m	SS mg/L	Turbidity	Radioactive iodine I-131	Radioactive cesium			
															Cs-134	Cs-137		
1	Tonegawa River	Hirosebash Bridge	Minakamimachi Town	2011/11/30	Sunny	12.0	0.30	8.7	0.0	76	5.5	4	6.6	<1	<1	<1		
2		Tsukiyonobashi Bridge	Minakamimachi Town	2011/11/30	Sunny	11.6	0.30	11.4	0.0	68	6.2	5	7.0	<1	<1	<1		
3		Akayagawa River	Kosodebashi Bridge	Minakamimachi Town	2011/11/30	Sunny	14.6	0.40	11.0	0.0	100 or more	9.4	3	5.1	<1	<1	<1	
4		Sakuragawa River	In Ooaza Yachi	Kawabamura Village	2011/12/7	Cloudy	4.8	0.40	5.3	0.0	100 or more	3.8	<1	0.2	<1	<1	<1	
5		Katashinagawa River	Kirinobashi Bridge	Katashinamura Village	2011/12/1	Cloudy	4.8	0.40	4.7	0.0	100 or more	3.5	<1	0.9	<1	<1	<1	
6			Tonemachitakatoya	Numatashi City	2011/12/7	Sunny	11.0	0.70	5.9	0.0	100 or more	6.4	<1	0.4	<1	<1	<1	
7			Futaebashi Bridge	Numatashi City/Shiomamura Village	2011/11/30	Sunny	10.5	0.40	9.4	0.0	100 or more	11.5	<1	0.9	<1	<1	<1	
8	Rigatsumama River	Gandozagawa River	Gandobashi Bridge	Kusatsumachi Town	2011/12/5	Cloudy	4.4	0.40	7.8	0.0	100 or more	376.0	2	0.3	<1	<1	<1	
9		Agatsumagawa River	Shintobashi Bridge	Naganoharamachi Town	2011/12/6	Cloudy	6.5	0.40	4.7	0.0	35	16.2	35	34	<1	<1	<1	
10		Shirasunagawa River	Shuttatsubashi Bridge	Nakanojomachi Town	2011/12/5	Cloudy	9.4	0.40	7.0	0.0	65	33.8	8	10	<1	<1	<1	
11		Agatsumagawa River	Downstream of Azumabashi Bridge	Higashiagatsumamachi Town	2011/12/1	Cloudy	8.8	0.20	8.9	0.0	100 or more	25.8	4	5.4	<1	<1	<1	
12		Nakutagawa River	Tonodabashi Bridge	Takayamura Village	2011/12/1	Cloudy	5.2	0.30	8.0	0.0	100 or more	12.5	2	2.4	<1	<1	<1	
13		Agatsumagawa River	Agatsumabashi Bridge	Shibukawashi City	2011/12/1	Cloudy	8.2	0.30	10.0	0.0	100 or more	21.7	1	1.7	<1	<1	<1	
14	Rivnaceg River	Tonegawa River	Taishobashi Bridge	Shibukawashi City	2011/12/1	Cloudy	7.2	0.40	9.9	0.0	100 or more	14.0	1	1.6	<1	<1	<1	
15		Takizawagawa River	Shintakizawabashi Bridge	Yoshiokamachi Town	2011/12/1	Cloudy	6.2	0.30	10.1	0.0	100 or more	24.1	11	6.0	<1	<1	<1	
16		Tonegawa River	Gunmaohashi Bridge	Maebashishi City	2011/12/2	Cloudy	6.2	0.60	7.7	0.0	66	18.6	9	9.1	<1	<1	<1	
17		Tonegawa River	Fukushimabashi Bridge	Tamamuraamachi Town	2011/12/3	Cloudy	10.2	0.40	9.1	0.0	28	20.0	31	23	<1	<1	<1	
18	Rivnaceg River	Nagaigawa River	Kamigondabashi Bridge	Takasakishi City	2011/12/1	Cloudy	8.0	0.40	9.0	0.0	100 or more	12.0	3	1.6	<1	<1	<1	
19		Karasugawa River	Karasugawabashi Bridge	Takasakishi City	2011/12/2	Snow	4.9	0.40	7.3	0.0	100 or more	12.2	1	1.1	<1	<1	<1	
20		Usuigawa River	Nakasebashi Bridge	Annakashi City	2011/12/1	Cloudy	11.2	0.40	9.3	0.0	100 or more	17.3	1	1.1	<1	<1	<1	
21			Hanatakabashi Bridge	Takasakishi City	2011/12/2	Cloudy	4.8	2.30	7.1	0.0	100 or more	39.1	3	2.4	<1	<1	<1	
22		Kaburagawa River	Tadakawabashi Bridge	Tomakashi City/Shimomachi Town	2011/12/5	Sunny	16.8	0.40	9.7	0.0	100 or more	33.2	1	1.8	<1	<1	<1	
23			Kaburagawabashi Bridge	Takasakishi City/Fujikashi City	2011/12/1	Cloudy	9.3	0.60	10.6	0.0	100 or more	39.7	4	3.0	<1	<1	<1	
24		Inogawa River	Hamaibashi Bridge	Takasakishi City	2011/12/2	Cloudy	6.1	0.50	9.5	0.0	100 or more	31.0	3	3.4	<1	<1	<1	
25		Someyagawa River	Yakushibashi Bridge	Shintomura Village	2011/12/2	Cloudy	5.0	0.30	9.1	0.0	100 or more	29.1	1	1.0	<1	<1	<1	
26		Ushikigawa River	In Motosojamachi Town	Maebashishi City	2011/12/2	Cloudy	5.5	0.30	9.3	0.0	100 or more	26.5	6	5.2	<1	<1	<1	
27		Inogawa River	Kamakurabashi Bridge	Takasakishi City	2011/12/1	Cloudy	7.6	0.25	12.1	0.0	100 or more	34.2	6	4.5	<1	<1	<1	
28	Karasugawa River	Iwakurabashi Bridge	Takasakishi City	2011/12/1	Cloudy	7.4	0.60	13.9	0.0	100 or more	39.8	3	1.7	<1	<1	<1		
29	Systm	Kannagawa River	Moritobashi Bridge	Kannamachi Town	2011/12/5	Sunny	9.6	1.00	7.8	0.0	100 or more	19.6	<1	0.3	<1	<1	<1	
30			Tobukyo Bridge	Fujikashi City/Kamikawamachi Town	2011/12/1	Cloudy	9.8	0.20	12.0	0.0	100 or more	24.5	1	1.8	<1	<1	<1	
31			Kannagawabashi Bridge	Kamisatomachi Town	2011/12/1	Cloudy	9.6	0.50	11.1	0.0	100 or more	24.3	3	1.4	<1	<1	<1	(Saitama Prefecture)
32	Tonegawa River	Bandoobashi Bridge	Honjoshi City	2011/12/2	Rain	6.2	0.50	7.9	0.0	61	26.3	14	13	<1	<1	<1	(Saitama Prefecture)	
33		Akagishirakawa River	In Shimohosomachi Town	Maebashishi City	2011/12/3	Rain	8.2	0.40	8.5	0.0	25	25.0	66	21	<1	<1	<1	
34		Momonokigawa River	Utsuboibashi Bridge	Maebashishi City	2011/12/3	Rain	7.6	0.70	8.4	0.0	34	22.9	29	19	<1	<1	<1	
35		Aratogawa River	Okuharabashi Bridge	Maebashishi City	2011/12/3	Rain	8.0	0.60	9.2	0.0	12	20.6	100	54	<1	<1	<1	
36		Kasukawa River	Hozumibashi Bridge	Isesakishi City	2011/12/3	Cloudy	11.9	0.40	10.7	0.0	13	19.5	85	49	<1	<1	<1	
37		Hirosegawa River	Nakajimabashi Bridge	Isesakishi City	2011/12/2	Cloudy	7.8	0.60	10.5	0.0	100 or more	33.8	7	6.4	<1	<1	<1	
38		Hayakawa River	Hayakawabashi Bridge	Isesakishi City	2011/12/2	Cloudy	3.6	0.40	8.8	0.0	100 or more	31.6	3	2.9	<1	<1	<1	
39			Maejimabashi Bridge	Otashi City	2011/12/2	Cloudy	7.6	0.50	9.8	0.0	100 or more	55.5	5	4.4	<1	<1	<1	
40		Ishidagawa River	Before the confluence with Okawa River	Otashi City	2011/12/2	Cloudy	9.5	0.40	12.5	0.0	100 or more	58.6	7	5.2	<1	<1	<1	
41			Furutonebashi Bridge	Otashi City	2011/12/2	Cloudy	7.5	0.30	10.8	0.0	100 or more	69.1	6	4.8	<1	<1	<1	
42		Kyuhakugawa River	Izumiohashi Bridge	Oizumimachi Town	2011/12/2	Rain	7.0	0.70	10.9	0.0	13	36.8	56	57	<1	<1	<1	
43		Tonegawa River	Toneozeki Weir	Chiyodamachi Town/Gyodashi City	2011/12/2	Rain	6.8	0.40	8.8	0.0	42	34.1	11	8.3	<1	<1	<1	
44		Wata River	Kogurogawa River	Kayanobashi Bridge	Kiryushi City	2011/12/7	Sunny	8.1	0.60	6.4	0.0	100 or more	4.8	<1	0.3	<1	<1	<1
45	Watarasegawa River		Takatsudo	Midorishi City	2011/12/2	Cloudy	3.4	0.50	9.9	0.0	100 or more	12.2	1	2.0	<1	<1	<1	
46			Intake for Akaiwayosui water channel	Kiryushi City	2011/12/2	Cloudy	6.2	0.40	10.0	0.0	100 or more	11.0	1	1.4	<1	<1	<1	
47	Kiryugawa River		Kannonbashi Bridge	Kiryushi City	2011/12/8	Cloudy	8.0	0.40	7.6	0.0	100 or more	5.5	<1	0.4	<1	<1	<1	
48			Sakaibashi Bridge	Kiryushi City	2011/12/1	Cloudy	6.8	0.30	10.0	0.0	100 or more	11.4	1	1.8	<1	<1	<1	
49	Tsurudagawa River	Iwatabashi Bridge	Itakuramachi Town	2011/12/3	Rain	6.8	0.60	8.5	0.0	23	34.0	26	19	<1	<1	<1		
50	Yatagawa River	Ainokawabashi Bridge	Itakuramachi Town/Kazoshi City	2011/12/2	Cloudy	7.6	0.60	11.2	0.0	55	67.4	11	10	<1	<1	<1		

*Collection points for rivers are listed from North to South, and for different points along the river, from upstream to downstream.

○River: Sediment Monitoring Results

No.	Sampling point				Sampling date	Weather	Air temperature ℃	Full depth m	General items				Concentration of radioactive material Bq/kg (dried mud)			Remarks	
	Water body		Point	Municipality					Mud temperature ℃	Mud sampling depth cm	Mud content %	Property	Radioactive iodine I-131	Radioactive cesium			
														Cs-134	Cs-137		
1	R i v e r g a w a	T o n e g a w a R i v e r	Tonegawa River	Hirosehashi Bridge	Minakamimachi Town	2011/11/30	Sunny	12.0	0.30	7.9	3	84.6	Gravel with sand	<30	39	38	
2			Tsukiyonobashi Bridge	Minakamimachi Town	2011/11/30	Sunny	11.6	0.30	11.8	5	82.9	Sand with gravel	<30	29	42		
3			Kosodebashi Bridge	Minakamimachi Town	2011/11/30	Sunny	14.6	0.40	11.2	5	82.7	Sand	<30	11	13		
4			Sakuragawa River	In Ooaza Yachi	Kawabamura Village	2011/12/7	Cloudy	4.8	0.40	5.8	5	82.5	Sand with gravel	<30	78	95	
5			Kirinokibashi Bridge	Katashinamura Village	2011/12/1	Cloudy	4.8	0.40	4.9	10	79.9	Sand	<30	18	20		
6			Katashinagawa River	Tonemachitakotaya	Numata City	2011/12/7	Sunny	11.0	0.70	6.8	5	79.7	Sand with gravel	<30	8	10	
7			Futaebashi Bridge	Numata City/Showanara Village	2011/11/30	Sunny	10.5	0.40	9.8	3	86.3	Sand with gravel	<30	11	19		
8	R i v e r g a w a	A g a t s u m a g a w a R i v e r	Gandozawagawa River	Gandobashi Bridge	Kusatsumachi Town	2011/12/5	Cloudy	4.4	0.40	7.4	5	78.5	Sand with gravel	<30	<10	<10	
9			Agatsumagawa River	Shintobashi Bridge	Naganoharamachi Town	2011/12/6	Cloudy	6.5	0.40	5.0	5	84.7	Sand with silt	<30	<10	<10	
10			Shirasunagawa River	Shuttatsubashi Bridge	Nakanomachi Town	2011/12/5	Cloudy	9.4	0.40	7.0	3	88.1	礫	<30	<10	12	
11			Agatsumagawa River	Downstream of Azumabashi Bridge	Higashiagatsumamachi Town	2011/12/1	Cloudy	8.8	0.20	9.0	3	90.6	Gravel with sand	<30	<10	<10	
12			Nakutagawa River	Tonodabashi Bridge	Takayamamura Village	2011/12/1	Cloudy	5.2	0.30	8.4	3	72.4	Sand	<30	95	120	
13			Agatsumagawa River	Agatsumabashi Bridge	Shibukawashi City	2011/12/1	Cloudy	8.2	0.30	10.5	5	60.4	Sand with gravel	<30	53	100	
14	R i v e r g a w a	T o n e g a w a R i v e r	Tonegawa River	Taishobashi Bridge	Shibukawashi City	2011/12/1	Cloudy	7.2	0.40	11.8	5	81.1	Sand with gravel	<30	16	23	
15			Takizawagawa River	Shintakizawabashi Bridge	Yoshiokamachi Town	2011/12/1	Cloudy	6.2	0.30	10.6	5	79.3	Sand with gravel	<30	96	110	
16			Tonegawa River	Gunmaobashi Bridge	Maebashishi City	2011/12/2	Cloudy	6.2	0.60	7.7	3	74.6	Silt with sand	<30	24	31	
17			Fukushimabashi Bridge	Tamamuramachi Town	2011/12/3	Cloudy	10.2	0.40	9.0	3	69.8	Sand with gravel	<30	51	61		
18	T o n e g a w a R i v e r	K a r a s u g a w a R i v e r	Nagaigawa River	Kamigondabashi Bridge	Takasakishi City	2011/12/1	Cloudy	8.0	0.40	9.0	3	81.1	Sand	<30	56	70	
19			Karasugawa River	Karasugawabashi Bridge	Takasakishi City	2011/12/2	Snow	4.9	0.40	7.4	5	79.4	Sand	<30	30	47	
20			Usuigawa River	Nakasebashi Bridge	Annakashi City	2011/12/1	Cloudy	11.2	0.40	9.3	5	80.4	Sand with gravel	<30	46	60	
21			Hanatabashi Bridge	Takasakishi City	2011/12/2	Cloudy	4.8	2.30	7.1	3	84.4	Sand	<30	18	20		
22			Kaburagawa River	Tadakawabashi Bridge	Tomokashi City/Shimomachi Town	2011/12/5	Sunny	16.8	0.40	9.6	5	87.0	Sand with gravel	<30	<10	17	
23			Kaburagawabashi Bridge	Takasakishi City/Fujokashi City	2011/12/1	Cloudy	9.3	0.60	10.8	10	61.7	Sand with gravel	<30	<10	<10		
24			Inogawa River	Hamaibashi Bridge	Takasakishi City	2011/12/2	Cloudy	6.1	0.50	9.6	5	80.5	Sand	<30	24	35	
25			Someyagawa River	Yakushibashi Bridge	Shintomura Village	2011/12/2	Cloudy	5.0	0.30	9.1	5	78.7	Sand	<30	58	84	
26			Ushikigawa River	In Motosojamachi Town	Maebashishi City	2011/12/2	Cloudy	5.5	0.30	9.4	3	77.1	Sand	<30	45	70	
27			Inogawa River	Kamakurabashi Bridge	Takasakishi City	2011/12/1	Cloudy	7.6	0.25	12.0	10	81.8	Sand with gravel	<30	36	32	
28			Karasugawa River	Iwakurabashi Bridge	Takasakishi City	2011/12/1	Cloudy	7.4	0.60	14.0	10	71.7	Silt with sand	<30	26	41	
29	S y s t e m	R i v e r	Moritobashi Bridge	Kannamachi Town	2011/12/5	Sunny	9.6	1.00	7.6	5	88.4	Sand with gravel	<30	<10	<10		
30			Kannagawa River	Tobukyo Bridge	Fujokashi City/Kamikawamachi Town	2011/12/1	Cloudy	9.8	0.20	12.3	10	90.6	Sand with gravel	<30	<10	<10	
31			Kannagawabashi Bridge	Kamisatomachi Town	2011/12/1	Cloudy	9.6	0.50	10.9	10	86.9	Sand with gravel	<30	<10	<10	(Saitama Prefecture)	
32			Tonegawa River	Bandoobashi Bridge	Honjoshi City	2011/12/2	Rain	6.2	0.50	7.8	3	79.5	Gravel with silt	<30	10	12	(Saitama Prefecture)
33	T o n e g a w a R i v e r	A k a g i s h i r a k a w a R i v e r	Agatsumagawa River	Maebashishi City	In Shimohosomachi Town	2011/12/3	Rain	8.2	0.40	8.4	3	69.5	Sand with gravel	<30	47	61	
34			Momonokigawa River	Utsuboibashi Bridge	Maebashishi City	2011/12/3	Rain	7.6	0.70	8.3	3	79.4	Sand	<30	15	12	
35			Aratagawa River	Okuharabashi Bridge	Maebashishi City	2011/12/3	Rain	8.0	0.60	9.1	3	52.5	Sand with silt	<30	<10	<10	
36			Kasukawa River	Hozumbashi Bridge	Isesakishi City	2011/12/3	Cloudy	11.9	0.40	10.8	3	80.2	Sand with gravel	<30	19	27	
37			Hirosegawa River	Nakajimabashi Bridge	Isesakishi City	2011/12/2	Cloudy	7.8	0.60	11.0	3	87.3	Sand with gravel	<30	9	15	
38			Hayakawa River	Hayakawabashi Bridge	Isesakishi City	2011/12/2	Cloudy	3.6	0.40	9.6	3	58.1	Sand with gravel	<30	150	220	
39			Maejimabashi Bridge	Otashi City	2011/12/2	Cloudy	7.6	0.50	10.0	10	82.5	Sand	<30	40	59		
40			Ishidagawa River	Before the confluence with Okawa River	Otashi City	2011/12/2	Cloudy	9.5	0.40	12.3	10	82.9	Sand with gravel	<30	<10	<10	
41			Furutonebashi Bridge	Otashi City	2011/12/2	Cloudy	7.5	0.30	11.0	10	84.6	Gravel with sand	<30	34	51		
42			Kyuhakugawa River	Izumiohashi Bridge	Oizumimachi Town	2011/12/2	Rain	7.0	0.70	10.5	12	80.7	Sand with gravel	<30	95	120	
43	Tonegawa River	Toneozeki Weir	Chiyodamachi Town/Gyodashi City	2011/12/2	Rain	6.8	0.40	8.5	10	66.3	Sand with silt	<30	95	140			
44	a w a t a r e s e g a w a R i v e r	K o g u r o g a w a R i v e r	Kogurogawa River	Kayanobashi Bridge	Kiryushi City	2011/12/7	Sunny	8.1	0.60	6.9	5	77.6	Sand with gravel	<30	140	200	
45			Watarasegawa River	Takatsudo	Midorishi City	2011/12/2	Cloudy	3.4	0.50	10.2	3	78.1	Sand	<30	34	52	
46			Intake for Akaiwayosui water channel	Kiryushi City	2011/12/2	Cloudy	6.2	0.40	8.9	3	82.5	Sand	<30	43	55		
47			Kiryugawa River	Kannonbashi Bridge	Kiryushi City	2011/12/8	Cloudy	8.0	0.40	8.0	5	82.0	Sand with gravel	<30	45	65	
48			Sakaibashi Bridge	Kiryushi City	2011/12/1	Cloudy	6.8	0.30	10.2	5	82.3	Gravel with sand	<30	88	110		
49			Tsuruudagawa River	Iwatabashi Bridge	Itakuramachi Town	2011/12/3	Rain	6.8	0.60	8.7	10	80.5	Sand with gravel	<30	160	210	
50	Yatagawa River	Ainokawabashi Bridge	Itakuramachi Town/Kazoshi City	2011/12/2	Cloudy	7.6	0.60	11.4	10	57.2	Silt with sand	<30	130	170			

*Collection points for rivers are listed from North to South, and for different points along the river, from upstream to downstream.

○River: Surrounding Environment (River Terrace) Monitoring Results

Sampling point				Sampling date	Weather	Air temperature ℃	Left bank					Right bank					Remarks	
No.	Water body Point Municipality						Property	Soil			Air dose μSv/h	Property	Soil			Air dose μSv/h		
								Concentration of radioactive material Bq/kg (dry)					Concentration of radioactive material Bq/kg (dry)					
							Radioactive iodine I-131	Radioactive cesium Cs-134 Cs-137										
1	Tonegawa River	Tonegawa River	Hirosebashi Bridge	Minakamimachi Town	2011/11/30	Sunny	12.0	Loamy	<30	100	190	0.33	Loamy	<30	660	820	0.31	
2		Tsukiyonobashi Bridge	Minakamimachi Town	2011/11/30	Sunny	11.6	Loamy	<30	92	110	0.16	Loamy	<30	520	670	0.15		
3		Akayagawa River	Kosodebashi Bridge	Minakamimachi Town	2011/11/30	Sunny	14.6	Loamy	<30	230	290	0.09	Loamy	<30	260	380	0.12	
4		Sakuragawa River	In Ooaza Yachi	Kawabamura Village	2011/12/7	Cloudy	4.8	Loamy	<30	940	1,100	0.43	Loamy	<30	1,600	2,100	0.38	
5		Kirinokibashi Bridge	Katashinamura Village	2011/12/1	Cloudy	4.8	Sandy	<30	290	370	0.19	Loamy	<30	500	600	0.14		
6		Katashinagawa River	Tonemachitakotoya	Numatashi City	2011/12/7	Sunny	11.0	Sandy	<30	55	55	0.11	Sandy	<30	14	22	0.13	
7		Futaebashi Bridge	Numatashi City/Showamura Village	2011/11/30	Sunny	10.5	Loamy	<30	560	770	0.13	Loamy	<30	350	460	0.12		
8	Riga River	Gandozawagawa River	Gandobashi Bridge	Kusatsumachi Town	2011/12/5	Cloudy	4.4	Loamy	<30	150	190	0.13	Loamy	<30	420	530	0.12	
9		Agatsumagawa River	Shintobashi Bridge	Naganoharamachi Town	2011/12/6	Cloudy	6.5	Loamy	<30	290	350	0.12	Loamy	<30	580	760	0.15	
10		Shirasunagawa River	Shuttatsubashi Bridge	Nakanomachi Town	2011/12/5	Cloudy	9.4	Loamy	<30	100	150	0.07	Loamy	<30	440	590	0.11	
11		Agatsumagawa River	Downstream of Azumabashi Bridge	Higashiagatsumamachi Town	2011/12/1	Cloudy	8.8	Loamy	<30	870	1,100	0.20	Loamy	<30	56	65	0.11	
12		Nakutagawa River	Tonodabashi Bridge	Takayamamura Village	2011/12/1	Cloudy	5.2	Loamy	<30	180	240	0.11	Loamy	<30	160	240	0.09	
13	Agatsumagawa River	Agatsumabashi Bridge	Shibukawashi City	2011/12/1	Cloudy	8.2	Loamy	<30	370	460	0.15	Loamy	<30	790	1,000	0.12		
14	Riwa River	Tonegawa River	Taishobashi Bridge	Shibukawashi City	2011/12/1	Cloudy	7.2	Loamy	<30	150	200	0.11	Loamy	<30	250	340	0.10	
15		Takizawagawa River	Shintakizawabashi Bridge	Yoshiokamachi Town	2011/12/1	Cloudy	6.2	Loamy	<30	210	280	0.09	Loamy	<30	820	870	0.08	
16		Tonegawa River	Gunmaobashi Bridge	Maebashishi City	2011/12/2	Cloudy	6.2	Loamy	<30	110	170	0.07	Loamy	<30	120	150	0.08	
17		Fukushimabashi Bridge	Tamamuramachi Town	2011/12/3	Cloudy	10.2	Loamy	<30	58	87	0.08	Loamy	<30	55	85	0.08		
18	Tonegawa River	Nagagawa River	Kamigondabashi Bridge	Takasakishi City	2011/12/1	Cloudy	8.0	Loamy	<30	340	460	0.16	Loamy	<30	450	500	0.19	
19		Karasugawa River	Karasugawabashi Bridge	Takasakishi City	2011/12/2	Snow	4.9	Loamy	<30	140	190	0.16	Loamy	<30	200	260	0.20	
20		Usuigawa River	Nakasebashi Bridge	Annakashi City	2011/12/1	Cloudy	11.2	Loamy	<30	900	1,100	0.23	Loamy	<30	490	600	0.20	
21		Hanatakabashi Bridge	Takasakishi City	2011/12/2	Cloudy	4.8	Loamy	<30	210	260	0.11	Loamy	<30	200	230	0.09		
22		Kaburagawa River	Tadakawabashi Bridge	Fujikashi City/Shimomachi Town	2011/12/5	Sunny	16.8	Loamy	<30	99	120	0.08	Sandy	<30	150	180	0.12	
23		Kaburagawabashi Bridge	Takasakishi City/Fujikashi City	2011/12/1	Cloudy	9.3	Loamy	<30	8	29	0.06	Loamy	<30	20	38	0.07		
24		Inogawa River	Hamaibashi Bridge	Takasakishi City	2011/12/2	Cloudy	6.1	Loamy	<30	270	340	0.09	Loamy	<30	140	180	0.09	
25		Someyagawa River	Yakushibashi Bridge	Shintomura Village	2011/12/2	Cloudy	5.0	Loamy	<30	250	310	0.08	Loamy	<30	120	170	0.08	
26		Ushikigawa River	In Motosojamachi Town	Maebashishi City	2011/12/2	Cloudy	5.5	Loamy	<30	100	110	0.06	Loamy	<30	150	170	0.07	
27		Inogawa River	Kamakurabashi Bridge	Takasakishi City	2011/12/1	Cloudy	7.6	Loamy	<30	46	80	0.06	Loamy	<30	95	130	0.08	
28	Karasugawa River	Iwakurabashi Bridge	Takasakishi City	2011/12/1	Cloudy	7.4	Loamy	<30	150	190	0.06	Loamy	<30	49	62	0.07		
29	Moritobashi Bridge	Kannamachi Town	2011/12/5	Sunny	9.6	Loamy	<30	95	120	0.09	Loamy	<30	100	140	0.07			
30	Kannagawa River	Tobukyo Bridge	Fujikashi City/Kamakuramachi Town	2011/12/1	Cloudy	9.8	Loamy	<30	36	61	0.09	Loamy	<30	130	170	0.09		
31	Kannagawabashi Bridge	Kamisatomachi Town	2011/12/1	Cloudy	9.6	Loamy	<30	120	130	0.07	Loamy	<30	10	25	0.08	(Saitama Prefecture)		
32	Tonegawa River	Bandoobashi Bridge	Honjoshi City	2011/12/2	Rain	6.2	Loamy	<30	210	250	0.09	Loamy	<30	32	48	0.08	(Saitama Prefecture)	
33	Akagishirakawa River	In Shimohosomachi Town	Maebashishi City	2011/12/3	Rain	8.2	Loamy	<30	78	140	0.10	Loamy	<30	140	180	0.08		
34	Momonokigawa River	Utsuobashi Bridge	Maebashishi City	2011/12/3	Rain	7.6	Loamy	<30	110	160	0.09	Loamy	<30	140	170	0.10		
35	Aratogawa River	Okuharabashi Bridge	Maebashishi City	2011/12/3	Rain	8.0	Loamy	<30	52	68	0.07	Loamy	<30	94	110	0.07		
36	Kasukawa River	Hozumibashi Bridge	Isesakishi City	2011/12/3	Cloudy	11.9	Loamy	<30	40	47	0.06	Loamy	<30	63	98	0.07		
37	Hirosegawa River	Nakajimbashi Bridge	Isesakishi City	2011/12/2	Cloudy	7.8	Loamy	<30	59	79	0.07	Loamy	<30	150	200	0.07		
38	Hayakawa River	Hayakawabashi Bridge	Isesakishi City	2011/12/2	Cloudy	3.6	Loamy	<30	92	110	0.10	Loamy	<30	190	280	0.09		
39	Maejimbashi Bridge	Otashi City	2011/12/2	Cloudy	7.6	Loamy	<30	72	94	0.07	Loamy	<30	95	110	0.10			
40	Ishidagawa River	Before the confluence with Okawa River	Otashi City	2011/12/2	Cloudy	9.5	Loamy	<30	100	110	0.08	Loamy	<30	120	150	0.08		
41	Furutonebashi Bridge	Otashi City	2011/12/2	Cloudy	7.5	Loamy	<30	71	100	0.09	Loamy	<30	81	99	0.09			
42	Kyuhakugawa River	Izumiohashi Bridge	Oizumimachi Town	2011/12/2	Rain	7.0	-	-	-	-	0.08	-	-	-	-	0.10	(Soil not exposed)	
43	Tonegawa River	Toneozeki Weir	Chiyodamachi Town/Gyodashi City	2011/12/2	Rain	6.8	Loamy	<30	200	260	0.09	Clay-loamy	<30	91	120	0.11		
44	Riwa River	Kogurogawa River	Kayanobashi Bridge	Kiryushi City	2011/12/7	Sunny	8.1	Loamy	<30	1,100	1,600	0.26	Loamy	<30	1,400	1,700	0.31	
45		Watarasegawa River	Takatsudo	Midorishi City	2011/12/2	Cloudy	3.4	Loamy	<30	78	87	0.11	Loamy	<30	140	190	0.10	
46		Intake for Akaiwayosui water channel	Kiryushi City	2011/12/2	Cloudy	6.2	Loamy	<30	440	560	0.11	Loamy	<30	64	84	0.10		
47		Kiryugawa River	Kannonbashi Bridge	Kiryushi City	2011/12/8	Cloudy	8.0	Loamy	<30	170	230	0.10	Loamy	<30	170	250	0.09	
48		Sakaibashi Bridge	Kiryushi City	2011/12/1	Cloudy	6.8	Loamy	<30	200	250	0.08	Loamy	<30	250	330	0.08		
49	Tsuruudagawa River	Iwabashi Bridge	Itakuramachi Town	2011/12/3	Rain	6.8	Loamy	<30	130	180	0.11	Loamy	<30	130	150	0.09		
50	Yatagawa River	Ainokawabashi Bridge	Itakuramachi Town/Kazoshi City	2011/12/2	Cloudy	7.6	Loamy	<30	270	340	0.07	Loamy	<30	130	180	0.07		

*Collection points for rivers are listed from North to South, and for different points along the river, from upstream to downstream. *Air dose was measured with a survey meter, TCS-172 or TCS-161 of Hitachi-Aloka Medical, Ltd.

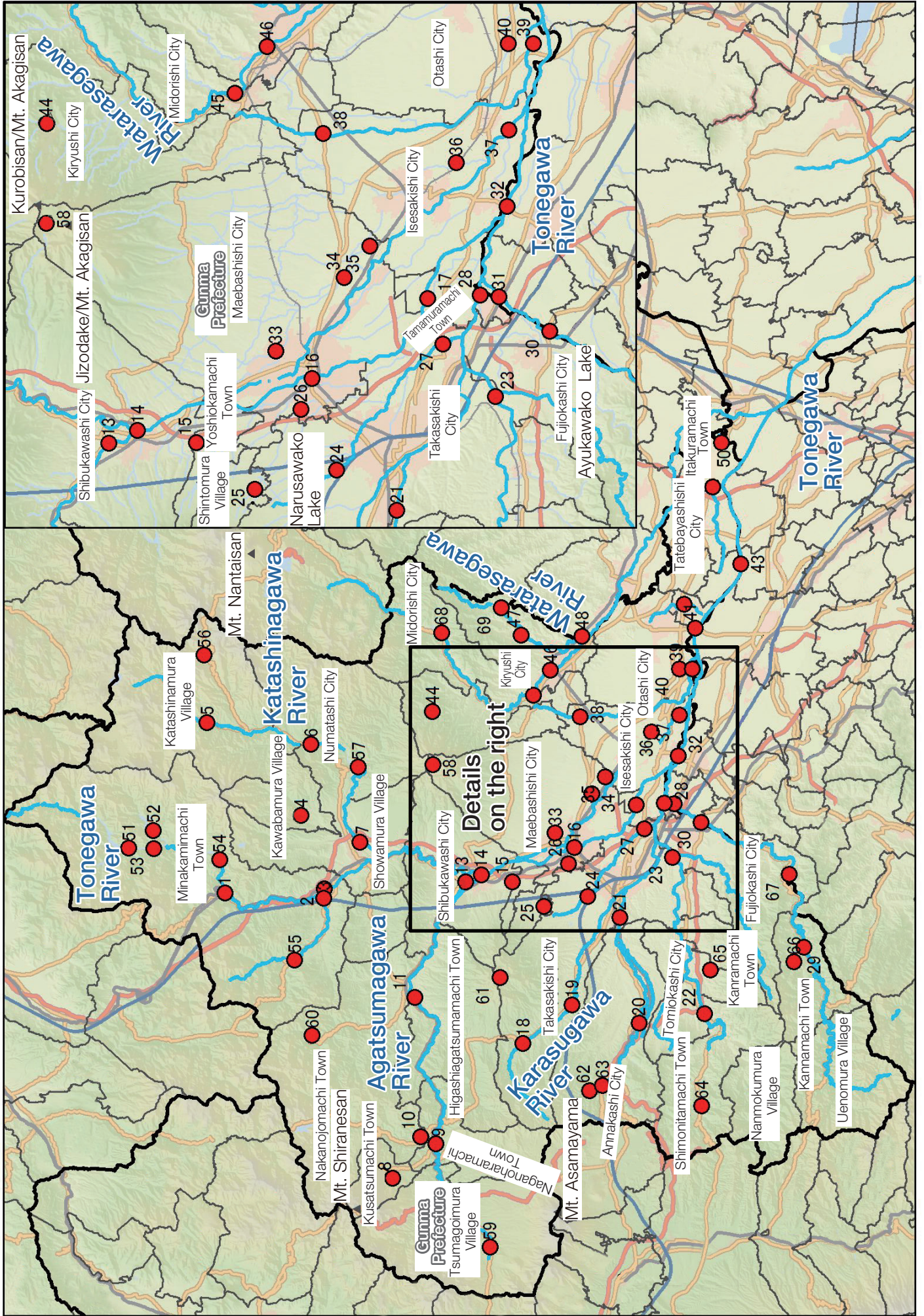
○Lake and Headwater: Water Quality Monitoring Results

Sampling point			Sampling date	Weather	Air temperature ℃	Full depth m	General items					Concentration of radioactive material Bq/L			Remarks
No.	Water body	Point					Water temperature ℃	Sampling depth m	Secchi disk depth m	Electrical conductivity mS/m	SS mg/L	Turbidity	Radioactive iodine I-131	Radioactive cesium Cs-134 Cs-137	
51	Okutoneko Lake (Yagisawa Dam)	Center	2011/12/2	Cloudy	1.8	77.2	9.8	0.5	1.1	22.9	5	9.0	<1	<1	<1
		1 m from the bottom	-	-	-	-	9.0	76.2	-	23.3	14	23	<1	<1	<1
52	Naramatako Lake (Naramata Dam)	Center	2011/12/2	Cloudy	1.4	86.3	6.7	0.5	1.3	23.2	3	5.0	<1	<1	<1
		1 m from the bottom	-	-	-	-	4.8	85.3	-	24.2	4	8.3	<1	<1	<1
53	Dogenko Lake (Sudagai Dam)	Center	2011/12/2	Cloudy	2.3	42.6	7.7	0.5	1.2	25.9	4	6.4	<1	<1	<1
		1 m from the bottom	-	-	-	-	6.8	41.6	-	26.4	7	8.4	<1	<1	<1
54	Fujiwarako Lake (Fujiwara Dam)	Center	2011/12/1	Cloudy	2.3	68.3	9.2	0.5	1.1	25.1	7	11	<1	<1	<1
		1 m from the bottom	-	-	-	-	8.8	67.3	-	25.7	28	35	<1	<1	<1
55	Akayako Lake (Aimata Dam)	Center	2011/12/7	Sunny	4.0	30.2	7.6	0.5	2.0	5.7	3	5.0	<1	<1	<1
		1 m from the bottom	-	-	-	-	6.8	29.2	-	5.2	9	10	<1	<1	<1
56	Marunuma Lake (Marunuma Dam)	Center	2011/12/16	Snow	-2.0	43.7	4.8	0.5	6.4	6.8	<1	1.1	<1	<1	<1
		1 m from the bottom	-	-	-	-	4.7	42.7	-	12.1	1	3.6	<1	<1	<1
57	Sonoharako Lake (Sonohara Dam)	Center	2011/12/8	Cloudy	3.3	27.1	6.1	0.5	3.8	5.3	3	3.1	<1	<1	<1
		1 m from the bottom	-	-	-	-	5.9	26.1	-	5.2	3	2.8	<1	<1	<1
58	Akagionuma Lake	Center	2011/11/28	Cloudy	11.6	17.5	7.6	0.5	4.0	4.6	1	1.8	<1	<1	<1
		1 m from the bottom	-	-	-	-	7.2	16.5	-	5.1	2	2.3	<1	<1	<1
59	Fashiroko Lake (Kazawa Dam)	Center	2011/12/6	Cloudy	1.9	5.0	4.4	0.5	1.8	5.9	4	5.9	<1	<1	<1
		1 m from the bottom	-	-	-	-	4.6	4.0	-	5.9	5	7.0	<1	<1	<1
60	Okushimako Lake (Shimagawa Dam)	Center	2011/12/16	Sunny	-0.2	50.2	6.3	0.5	18.5	12.6	<1	<0.1	<1	<1	<1
		1 m from the bottom	-	-	-	-	6.1	49.2	-	12.7	<1	0.1	<1	<1	<1
61	Harunako Lake	Center	2011/11/23	Clear	7.3	14.8	9.9	0.5	5.0	9.8	1	5.2	<1	<1	<1
		1 m from the bottom	-	-	-	-	9.9	13.8	-	11.4	1	5.0	<1	<1	<1
62	Kirizumiko Lake (Kirizumi Dam)	Center	2011/12/1	Cloudy	6.3	0.7	8.5	0.0	0.7 or more	12.1	2	6.1	<1	<1	<1
63	Usuiko Lake (Sakamoto Dam)	Center	2011/12/1	Cloudy	5.6	13.2	8.8	0.5	3.3	11.6	1	2.9	<1	<1	<1
		1 m from the bottom	-	-	-	-	8.4	12.2	-	11.6	1	2.5	<1	<1	<1
64	Arafuneko Lake (Dodairagawa Dam)	Center	2011/12/6	Cloudy	9.7	29.8	10.5	0.5	2.3	38.0	3	5.2	<1	<1	<1
		1 m from the bottom	-	-	-	-	8.3	28.8	-	46.1	6	11	<1	<1	<1
65	Oshioke Lake (Oshio Dam)	Center	2011/12/6	Cloudy	8.0	13.1	10.6	0.5	4.1	23.4	2	2.8	<1	<1	<1
		1 m from the bottom	-	-	-	-	10.7	12.1	-	23.0	3	3.0	<1	<1	<1
66	Hebikamiko Lake (Shiozawa Dam)	Center	2011/12/6	Cloudy	8.6	14.7	8.6	0.5	2.1	16.8	2	4.4	<1	<1	<1
		1 m from the bottom	-	-	-	-	8.4	13.7	-	16.8	3	4.8	<1	<1	<1
67	Kannako Lake (Shimokubo Dam)	Center	2011/12/6	Cloudy	7.0	79.4	11.6	0.5	1.2	15.2	3	7.1	<1	<1	<1
		1 m from the bottom	-	-	-	-	5.6	78.4	-	18.8	13	23	<1	<1	<1
68	Kusakiko Lake (Kusaki Dam)	Center	2011/12/9	Sunny	3.8	51.0	9.8	0.5	5.5	10.6	<1	1.8	<1	<1	<1
		1 m from the bottom	-	-	-	-	9.0	50.0	-	10.6	1	2.3	<1	<1	<1
69	Umedako Lake (Kiryugawa Dam)	Center	2011/12/9	Cloudy	1.5	27.0	8.4	0.5	2.8	6.3	1	3.0	<1	<1	<1
		1 m from the bottom	-	-	-	-	5.8	26.0	-	8.1	5	18	<1	<1	<1

○Lake and Headwater: Sediment and Surrounding Environment (Lake Shore) Monitoring Results

Sampling point			Sampling date	Weather	Air temperature ℃	Full depth m	Sediment							Surrounding environment (lake shore)					Remarks	
							General items				Concentration of radioactive material Bq/kg (dried mud)			Soil			Air dose μSv/h			
No.	Water body		Point	Mud temperature ℃	Mud sampling depth cm	Mud content %	Property	Radioactive iodine I-131	Radioactive cesium		Property	Concentration of radioactive material Bq/kg (dry)			Air dose μSv/h					
									Cs-134	Cs-137		I-131	Cs-134	Cs-137						
51	T o n e g a w a R i v e r	Okutoneko Lake (Yagisawa Dam)	Center	2011/12/2	Cloudy	1.8	77.2	9.3			5				36.1	Silt	<30	320	430	Loamy
52		Naramatako Lake (Naramata Dam)	Center	2011/12/2	Cloudy	1.4	86.3	6.3	10	23.8	Silt	<30	<15	<21	Sandy	<30	190	200	0.32	
53		Dogenko Lake (Sudagai Dam)	Center	2011/12/2	Cloudy	2.3	42.6	7.7	5	37.1	Silt	<30	620	870	Loamy	<30	150	180	0.26	
54		Fujiwarako Lake (Fujiwara Dam)	Center	2011/12/1	Cloudy	2.3	68.3	8.9	10	31.0	Silt	<30	2,000	2,600	Loamy	<30	310	450	0.15	
55		Akayako Lake (Aimata Dam)	Center	2011/12/7	Sunny	4.0	30.2	6.4	10	41.4	Silt	<30	750	940	Loamy	<30	540	710	0.17	
56		Marunuma Lake (Marunuma Dam)	Center	2011/12/16	Snow	-2.0	43.7	4.8	10	23.5	Silt	<30	<10	<31	Loamy	<30	56	78	0.14	
57		Sonoharako Lake (Sonohara Dam)	Center	2011/12/8	Cloudy	3.3	27.1	7.2	10	42.1	Silt	<30	180	240	Loamy	<30	230	320	0.13	
58		Akagionuma Lake	Center	2011/11/28	Cloudy	11.6	17.5	8.0	10	14.6	Silt	<30	430	830	Loamy	<30	260	300	0.15	
59	R i v e r	Tashiroko Lake (Kazawa Dam)	Center	2011/12/6	Cloudy	1.9	5.0	5.4	10	27.6	Silt	<30	270	380	Loamy	<30	240	380	0.14	
60		Okushimako Lake (Shimagawa Dam)	Center	2011/12/16	Sunny	-0.2	50.2	6.8	12	38.7	Silt	<30	250	410	Loamy	<30	3,100	4,000	0.35	
61	K a r a s u g a w a R i v e r	Harunako Lake	Center	2011/11/23	Clear	7.3	14.8	10.0	12	8.9	Silt	<30	<41	<68	Loamy	<30	1,100	1,400	0.37	
62		Kirizumiko Lake (Kirizumi Dam)	Center	2011/12/1	Cloudy	6.3	0.7	9.8	5	37.2	Silt	<30	<16	49	Loamy	<30	390	510	0.18	
63		Usuiko Lake (Sakamoto Dam)	Center	2011/12/1	Cloudy	5.6	13.2	9.7	12	27.2	Silt	<30	1,100	1,500	Loamy	<30	290	370	0.15	
64		Arafuneko Lake (Dodairagawa Dam)	Center	2011/12/6	Cloudy	9.7	29.8	7.3	12	34.8	Silt	<30	<11	37	Loamy	<30	330	390	0.09	
65		Oshioko Lake (Oshio Dam)	Center	2011/12/6	Cloudy	8.0	13.1	11.2	12	29.6	Silt	<30	320	420	Loamy	<30	240	320	0.08	
66		Hebikamiko Lake (Shiozawa Dam)	Center	2011/12/6	Cloudy	8.6	14.7	8.6	5	38.6	Silt with sand	<30	710	960	Sandy	<30	40	55	0.11	
67		Kannako Lake (Shimokubo Dam)	Center	2011/12/6	Cloudy	7.0	79.4	10.2	5	45.0	Silt with sand	<30	27	48	Loamy	<30	210	300	0.06	
68	R i v e r	Kusakiko Lake (Kusaki Dam)	Center	2011/12/9	Sunny	3.8	51.0	9.8	5	41.1	Silt	<30	60	87	Loamy	<30	660	790	0.20	
69		Umedako Lake (Kiriyugawa Dam)	Center	2011/12/9	Cloudy	1.5	27.0	6.3	5	24.9	Silt	<30	79	100	Clay-loamy	<30	150	250	0.11	

*Air dose was measured with a survey meter, TCS-172 or TCS-161 of Hitachi-Aloka Medical, Ltd.



○ Implementation Status of Radioactive Material Monitoring of the Surface Water Bodies (as of January 13)

