

(News Release)

The Results of Radioactive Material Monitoring of the Surface Water Bodies  
within Gunma Prefecture  
(January-March Samples)

Friday, April 26, 2013  
Water Environment Division,  
Environment Management Bureau,  
Ministry of the Environment  
Direct line: 03-5521-8316  
Switchboard: 03-3581-3351  
Director: Masanobu Miyazaki (ext. 6610)  
Deputy Director: Saori Nagasawa (ext. 6614)  
Coordinator: Katsuhiko Sato (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 and headwaters, and coasts), etc.).

Samples taken from the surface water bodies of Gunma Prefecture during the period of January 9-March 3, 2013 have been measured as part of MOE's efforts to monitor radioactive materials; the results have recently been compiled and are released here.

The monitoring results of radioactive materials in surface water bodies carried out to date can be found at the following web page: <http://www.env.go.jp/jishin/rmp.html#monitoring>

1. Survey Overview

(1) Survey Locations

68 environmental reference points, etc. in the surface water bodies within Gunma Prefecture  
(Rivers: 46 locations, Lakes: 22 locations)

(2) Survey Method

- Measurement of concentrations of radioactive materials (radioactive cesium (Cs-134 and Cs-137), etc.) 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 (\* denotes the results of the previous survey: October-December 2012)

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

Cs-134 + Cs-137: Not detectable (ND) at any location (\* ND at any location)

<Reference>

Specification and Standards for Food, Food Additives, etc. in accordance with the Food Sanitation Act (Drinking Water) (Ministry of Health, Labour and Welfare Public Notice No.130, March 15, 2012)  
Radioactive cesium (total for Cs-134+Cs-137): 10Bq/kg

Target value for radioactive materials in tap water (management target for water supply facilities) (March 5, 2012; 0305 Notice No.1 from the Director of the Water Supply Division, Health Service Bureau, Ministry of Health, Labour and Welfare)

Radioactive cesium (total for Cs-134+Cs-137): 10Bq/kg

(2) Sediment (Lower detection limit: 10Bq/kg (dried mud))

For rivers, levels were around 500Bq/kg or below at all locations, and have generally remained constant or had a declining tendency. For lakes and headwaters, levels were around 1,000Bq/kg or below at most locations, and have generally remained constant or had a declining tendency.

(Rivers)

Cs-134 + Cs-137: ND-490Bq/kg (dried mud) (\*ND-1,560Bq/kg (dried mud))

(Lakes and head waters)

Cs-134 + Cs-137: 239-1,350Bq/kg (dried mud) (\*16-3,500Bq/kg (dried mud))

<Reference> Number of locations by radioactive cesium concentration (500Bq/kg)

Numbers in ( ) denote results measured on the previous occasion.

	500 or below	501 -1,000	1,001 -1,500	1,501 -2,000	2,001 -2,500	2,501 -3,000	3,001 or more	Total
Rivers	42 (53)	0 (1)	0 (0)	0 (1)	0 (0)	0 (0)	0 (0)	42 (55)
Lakes and headwaters	4 (9)	1 (6)	1 (2)	0 (2)	0 (2)	0 (0)	0 (1)	6 (22)

(3) Surrounding Environment (Lower detection limit: 10Bq/kg (dry))

(Rivers)

Cs-134 + Cs-137: ND-3,500Bq/kg (dry) (\*11-9,300Bq/kg (dry))

Spatial dose: 0.04-0.21µSv/h

(Lakes and headwaters)

Cs-134 + Cs-137: 150- 1,130Bq/kg (dry) (\*120-3,300Bq/kg (dry))

Spatial dose: 0.06-0.15µSv/h

(Annex for details)

(Map attached)

Future Plans

MOE intends to continue to measure radioactive materials in water, sediment, etc. in rivers, lakes, etc. in FY2013, since concentrations of radioactive materials seem to show fluctuations, depending on locations, due to minor differences in sampling points or properties of samples of each survey.

No.	Sampling point			Sampling date	Weather	Full depth m	General items					Concentration of radioactive material Bq/L			Remarks	
	Water body	Point	Municipality				Sampling depth m	Transparency cm	Electrical conductivity mS/m	SS mg/L	Turbidity	Radioactive iodine I-131	Radioactive cesium Cs-134 Cs-137			
1	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  S y s t e m	Tonegawa River	Hirosebash Bridge	Mimakamimachi Town	2013/1/29	Snow	0.6	0.0	>100	4	<1	1	<1	<1	<1	
2			Tsukiyonobashi Bridge		2013/1/22	Sunny	0.3	0.0	>100	4	<1	1	<1	<1	<1	
3		Akayagawa River	Kosodebash Bridge		2013/1/22	Sunny	0.3	0.0	>100	23	<1	1	<1	<1	<1	
4		Sakuragawa River	In Ooaza Yachi	Kawabamura Village	2013/1/29	Sunny	0.3	0.0	>100	8	1	0	<1	<1	<1	
5		Katshingagawa River	Kirinokibushi Bridge	Katushinamura Village	2013/1/29	Sunny	0.3	0.0	>100	7	<1	0	<1	<1	<1	
6			Tonemachitakotoya	Numatashi City	2013/1/22	Sunny	-	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground
7			Futaebashi Bridge	Numatashi City>Showamura Village	2013/1/23	Cloudy	0.3	0.0	>100	16	<1	1	<1	<1	<1	
8		Agatsumagawa River	Shintobashi Bridge	Naganoharamachi Town	2013/1/23	Sunny	0.8	11	32	27	15	11	<1	<1	<1	
9		Shirasunagawa River	Shuttatsubashi Bridge	Nakanojomachi Town	2013/1/23	Sunny	1.3	0.0	>100	18	<1	0	<1	<1	<1	
10		Agatsumagawa River	Downstream of Azumabashi Bridge	Higashiagatsumamachi Town	2013/1/23	Sunny	0.3	0.0	74	37	5	5	<1	<1	<1	
11		Nakutagawa River	Tonodabashi Bridge	Takayamamura Village	2013/1/29	Sunny	0.3	0.0	>100	14	<1	1	<1	<1	<1	
12		Agatsumagawa River	Agatsumabashi Bridge	Shibukawashi City	2013/1/24	Sunny	0.3	0.0	42	33	10	8	<1	<1	<1	
13		Tonegawa River	Taishobashi Bridge		2013/1/24	Sunny	0.7	0.0	>100	12	2	2	2	<1	<1	<1
14		Takizawagawa River	Shintakizawabashi Bridge	Shibukawashi City/Yoshiokamachi Town	2013/1/24	Sunny	0.3	0.0	>100	30	3	2	<1	<1	<1	
15		Tonegawa River	Gunmaobashi Bridge	Maebashishi City	2013/1/24	Sunny	0.7	0.0	48	22	7	4	<1	<1	<1	
16			Fukushimabashi Bridge	Tamamuramachi Town	2013/1/24	Sunny	0.3	0.0	50	27	8	4	<1	<1	<1	
17		Nagagawa River	Kamigondabashi Bridge	Takasakishi City	2013/1/23	Sunny	0.3	0.0	>100	14	<1	1	<1	<1	<1	
18		Karasugawa River	Karasugawabashi Bridge		2013/1/23	Sunny	0.5	0.0	>100	15	<1	1	<1	<1	<1	
19		Usugawa River	Nakasebashi Bridge	Annakashi City	2013/1/31	Sunny	0.4	0.0	>100	21	1	1	<1	<1	<1	
20			Hanatakabashi Bridge	Takasakishi City	2013/1/23	Sunny	0.7	0.0	>100	79	1	2	<1	<1	<1	
21		Kaburagawa River	Tadakawabashi Bridge	Tomiokashi City/Shimonitamachi Town	2013/1/31	Sunny	0.4	0.0	>100	42	<1	1	<1	<1	<1	
22			Kaburagawabashi Bridge	Takasakishi City/Fujiokashi City	2013/1/23	Cloudy	0.5	0.0	>100	49	2	2	<1	<1	<1	
23		Ogawa River	Kinzanbashi Bridge	Kanramachi Town	2013/1/31	Sunny	0.2	0.0	>100	23	<1	1	<1	<1	<1	
24		Nanmokugawa River	Ozawabashi Bridge	Nanmokumura Village	2013/1/31	Sunny	0.4	0.0	>100	29	<1	1	<1	<1	<1	
25		Someyagawa River	Yakushibashi Bridge	Shintomura Village	2013/1/30	Sunny	0.2	0.0	75	33	3	2	<1	<1	<1	
26		Inogawa River	Kamakurabashi Bridge	Takasakishi City	2013/1/23	Cloudy	0.5	0.0	>100	54	4	2	<1	<1	<1	
27		Karasugawa River	Iwakurabashi Bridge	Tamamuramachi Town	2013/1/23	Cloudy	0.4	0.0	>100	45	1	1	<1	<1	<1	
28			Shinkanabashi Bridge	Uenomura Village	2013/1/31	Sunny	0.2	0.0	>100	22	<1	1	<1	<1	<1	
29		Kannagawa River	Moritobashi Bridge	Kanramachi Town	2013/1/31	Sunny	0.5	0.0	>100	23	<1	1	<1	<1	<1	
30			Tobukyo Bridge	Fujiokashi City/Kamikawamachi Town	2013/1/30	Sunny	0.2	0.0	>100	25	1	1	<1	<1	<1	
31			Kannagawabashi Bridge	Kamisatomachi Town	2013/1/30	Sunny	0.2	0.0	>100	26	1	1	<1	<1	<1	
32		Tonegawa River	Bandoobashi Bridge	Iesakishi City/Honjoshi City	2013/1/31	Sunny	0.4	0.0	90	30	5	3	<1	<1	<1	
33		Akagishirakawa River	In Shimohosomachi Town	Maebashishi City	2013/1/30	Sunny	0.2	0.0	>100	36	<1	1	<1	<1	<1	
34		Momonokigawa River	Usuboibashi Bridge		2013/1/30	Sunny	0.2	0.0	>100	29	<1	1	<1	<1	<1	
35		Aratogawa River	Okuharabashi Bridge		2013/1/30	Sunny	0.1	0.0	25	44	8	8	<1	<1	<1	
36		Kasukawa River	Hozumibashi Bridge		2013/1/31	Sunny	0.5	0.0	42	49	9	6	<1	<1	<1	
37		Hirosegawa River	Nakajimbashi Bridge	Iesakishi City	2013/1/31	Sunny	0.2	0.0	65	39	6	3	<1	<1	<1	
38		Tonegawa River	Tonezeeki Weir	Chiyodamachi Town/Gyodashi City	2013/1/31	Sunny	0.3	0.0	34	32	7	5	<1	<1	<1	
39		Kogunogawa River	Kayanobashi Bridge	Kiriyushi City	2013/2/5	Sunny	0.4	0.0	>100	8	<1	1	<1	<1	<1	
40			Takatsudo		2013/2/4	Sunny, then cloudy	0.6	0.0	>100	12	2	2	<1	<1	<1	
41		Watarasegawa River	Intake for Akaiwayosui water channel		2013/2/7	Cloudy	1.4	0.0	>100	13	<1	1	<1	<1	<1	
42		Tataragawa River	Ejiribashi Bridge	Ouramachi Town	2013/1/31	Sunny	0.2	0.0	32	52	15	10	<1	<1	<1	
43			Kannonbashi Bridge	Kiriyushi City	2013/2/5	Sunny	0.4	0.0	>100	8	1	1	<1	<1	<1	
44		Kiryugawa River	Sakaibashi Bridge		2013/2/7	Sunny	1.2	0.0	>100	10	<1	1	<1	<1	<1	
45		Tsurudagawa River	Jonuma Lake	Tatebayashishi City	2013/1/31	Sunny	1.0	0.0	14	55	18	15	<1	<1	<1	
46		Yatagawa River	Togodabashi Bridge	Meiwamachi Town/Iukuramachi Town	2013/1/31	Sunny	0.2	0.0	40	104	7	5	<1	<1	<1	

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

ORiver: Sediment Monitoring Results

No.	Sampling point			Sampling date	Weather	Full depth m	General items			Concentration of radioactive material Bq/kg (dried mud)				Remarks	
	Water body	Point	Municipality				Mud sampling depth cm	Mud content %	Property	Radioactive iodine	Radioactive cesium		Total		
										I-131	Cs-134	Cs-137			
1	Tonegawa River	Hirosebash Bridge	Minakaminachi Town	2013/1/29	Snow	0.6	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground	
2		Tsukuyonobashi Bridge		2013/1/22	Sunny	0.3	3	91	Sand	<30	24	47	71		
3		Akayagawa River	Kosodebashi Bridge		2013/1/22	Sunny	0.3	3	80	Sand	<30	42	71	113	
4		Sakuragawa River	In Oozaya Yachi	Kawabamura Village	2013/1/29	Sunny	0.3	3	85	Gravel/sand	<30	91	180	271	
5		Katashinagawa River	Kirinokibashi Bridge	Katashinamura Village	2013/1/29	Sunny	0.3	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground
6			Tonemachitakatoya	Numatashi City	2013/1/22	Sunny	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground
7			Futabashi Bridge	Numatashi City/Showamura Village	2013/1/23	Cloudy	0.3	2	88	Sand	<30	42	84	126	
8		Agatsumagawa River	Shintobashi Bridge	Naganoharamachi Town	2013/1/23	Sunny	0.8	2	90	Sand	<30	<10	<10	-	
9		Shirasumagawa River	Shuttasubashi Bridge	Nakanojomachi Town	2013/1/23	Sunny	1.3	-	-	-	-	-	-	-	Unable to collect mud due to many rocks
10		Agatsumagawa River	Downstream of Azumabashi Bridge	Higashiagatsumamachi Town	2013/1/23	Sunny	0.3	2	90	Sand	<30	<10	<10	-	
11		Nakutagawa River	Tonodabashi Bridge	Takayamamura Village	2013/1/29	Sunny	0.3	2	88	Sand	<30	26	57	83	
12		Agatsumagawa River	Agatsumabashi Bridge		2013/1/24	Sunny	0.3	2	90	Sand	<30	<10	11	11	
13		Tonegawa River	Taishobashi Bridge	Shibukawashi City	2013/1/24	Sunny	0.7	5	88	Sand	<30	19	31	50	
14		Takizawagawa River	Shintakizawabashi Bridge	Shibukawashi City/Yoshiokamachi Town	2013/1/24	Sunny	0.3	2	70	Sand	<30	85	160	245	
15		Tonegawa River	Gummaohashi Bridge	Maebashishi City	2013/1/24	Sunny	0.7	3	81	Sand	<30	19	34	53	
16			Fukushimabashi Bridge	Tamamuramachi Town	2013/1/24	Sunny	0.3	1	85	Sand	<30	14	25	39	
17	Karasugawa River	Nagaigawa River	Kamigondabashi Bridge	Takasakishi City	2013/1/23	Sunny	0.3	3	82	Sand	<30	60	110	170	
18		Karasugawa River	Karasugawabashi Bridge		2013/1/23	Sunny	0.5	4	84	Sand	<30	12	27	39	
19		Usuigawa River	Nakasebashi Bridge	Annakashi City	2013/1/31	Sunny	0.4	4	87	Sand	<30	24	39	63	
20			Hanatakabashi Bridge	Takasakishi City	2013/1/23	Sunny	0.7	3	81	Sand/silt	<30	19	42	61	
21		Kaburagawa River	Tadakawabashi Bridge	Tomiokashi City/Shimonitamachi Town	2013/1/31	Sunny	0.4	10	89	Sand	<30	<10	17	17	
22			Kaburagawabashi Bridge	Takasakishi City/Fujiokashi City	2013/1/23	Cloudy	0.5	4	65	Sand/silt	<30	27	46	73	
23		Ogawa River	Kinzanbashi Bridge	Kanramachi Town	2013/1/31	Sunny	0.2	5	92	Sand	<30	<10	13	13	
24		Nanmokugawa River	Ozawabashi Bridge	Nanmokumura Village	2013/1/31	Sunny	0.4	10	92	Gravel/sand	<30	<10	<10	-	
25		Someyagawa River	Yakushibashi Bridge	Shintomura Village	2013/1/30	Sunny	0.2	6	89	Gravel/sand	<30	20	33	53	
26		Inogawa River	Kamakurabashi Bridge	Takasakishi City	2013/1/23	Cloudy	0.5	3	88	Sand	<30	<10	<10	-	
27			Karasugawa River	Iwakurabashi Bridge	Tamamuramachi Town	2013/1/23	Cloudy	0.4	4	63	Silt	<30	140	240	380
28		Kannagawa River	Shinkanamebashi Bridge	Uenomura Village	2013/1/31	Sunny	0.2	5	91	Gravel/sand	<30	<10	<10	-	
29			Moritobashi Bridge	Kannamachi Town	2013/1/31	Sunny	0.5	5	95	Sand	<30	<10	<10	-	
30			Tobukyo Bridge	Fujikashi City/Kamikawamachi Town	2013/1/30	Sunny	0.2	1	92	Gravel/sand	<30	<10	<10	-	
31			Kannagawabashi Bridge	Kamisatomachi Town	2013/1/30	Sunny	0.2	2	70	Silt	<30	36	71	107	
32		Tonegawa River	Bandoobashi Bridge	Isesakishi City/Honjoshi City	2013/1/31	Sunny	0.4	1	85	Sand	<30	<10	17	17	
33	Tonogawa River	Akagishirakawa River	In Shimohosoiomachi Town	2013/1/30	Sunny	0.2	2	80	Sand	<30	13	28	41		
34		Momonokigawa River	Utsuboibashi Bridge	Maebashishi City	2013/1/30	Sunny	0.2	5	82	Sand/gravel	<30	<10	<10	-	
35		Aratogawa River	Okuharabashi Bridge		2013/1/30	Sunny	0.1	4	88	Sand	<30	<10	<10	-	
36		Kasukawa River	Hozumbashi Bridge		2013/1/31	Sunny	0.5	3	89	Sand	<30	<10	16	16	
37		Hirosegawa River	Nakajimbashi Bridge	Isesakishi City	2013/1/31	Sunny	0.2	4	80	Sand/silt	<30	13	22	35	
38		Tonegawa River	Toneozeki Weir	Chiyodamachi Town/Gyodashi City	2013/1/31	Sunny	0.3	5	84	Sand	<30	30	53	83	
39		Kogurogawa River	Kayanobashi Bridge		2013/2/5	Sunny	0.4	7	87	Sand	<30	46	93	139	
40	Watarasegawa River	Takatsudo	Kiryushi City	2013/2/4	Sunny, then cloudy	0.6	5	86	Sand	<30	20	44	64		
41		Intake for Akaiwayosui water channel		2013/2/7	Cloudy	1.4	10	87	Sand	<30	30	51	81		
42	Tataragawa River	Ejimbashi Bridge	Ouramachi Town	2013/1/31	Sunny	0.2	4	82	Sand	<30	67	130	197		
43	Kiryugawa River	Kannonbashi Bridge	Kiryushi City	2013/2/5	Sunny	0.4	4	78	Sand	<30	75	160	235		
44		Sakaibashi Bridge		2013/2/7	Sunny	1.2	6	91	Sand	<30	36	68	104		
45	Tsuruudagawa River	Jonuma Lake	Tatebayashishi City	2013/1/31	Sunny	1.0	15	34	Silt	<30	51	90	141		
46	Yatagawa River	Togodabashi Bridge	Meiwamachi Town/Itakuramachi Town	2013/1/31	Sunny	0.2	10	60	Silt	<30	170	320	490		

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

ORiver: Surrounding Environment Monitoring Results

No.	Sampling point			Sampling date	Weather	Property	Left bank				Air dose µSv/h	Property	Right bank				Air dose µSv/h	Remarks		
	Water body	Point	Municipality				Concentration of radioactive material Bq/kg (dry)						Concentration of radioactive material Bq/kg (dry)							
							Radioactive iodine I-131	Radioactive cesium Cs-134 Cs-137		Total			Radioactive iodine I-131	Radioactive cesium Cs-134 Cs-137		Total				
1	Tonegawa River	Tonegawa River	Hiroebashi Bridge	2013/1/29	Snow	-	-	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground	
2		Tonegawa River	Tsukiyonobashi Bridge	Minakamimachi Town	2013/1/22	Sunny	-	-	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground
3		Akayagawa River	Kowodebashi Bridge		2013/1/22	Sunny	Sandy	<30	51	79	130	0.10	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground
4		Sakuragawa River	In Oaza Yachi	Kawabamura Village	2013/1/29	Sunny	-	-	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground
5		Katsuhigawa River	Kirinoebashi Bridge	Katsuhinamura Village	2013/1/29	Sunny	-	-	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground
6			Tonemachikatoyota	Numatsashi City	2013/1/22	Sunny	-	-	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground
7			Futatabashi Bridge	Numatsashi City/Showamura Village	2013/1/23	Cloudy	Loamy	<30	630	1,100	1,730	0.10	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground
8		Agatsumagawa River	Shintobashi Bridge	Nagamoharamachi Town	2013/1/23	Sunny	-	-	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground
9		Shirasunagawa River	Shutatatsubashi Bridge	Nakanojomachi Town	2013/1/23	Sunny	-	-	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground
10		Agatsumagawa River	Downstream of Azumabashi Bridge	Higashitagatsumamachi Town	2013/1/23	Sunny	Sandy/skeletal	<30	<10	<10	-	0.04	Loamy	<30	220	420	640	0.08	-	Unable to collect samples due to snow on the ground
11	Nakutagawa River	Tonodabashi Bridge	Takayamamura Village	2013/1/29	Sunny	-	-	-	-	-	-	Loamy	<30	130	270	400	0.06	-	Unable to collect samples due to snow on the ground	
12	Agatsumagawa River	Agatsumabashi Bridge	Shibukawashi City	2013/1/24	Sunny	Loamy	<30	270	500	770	0.09	Loamy	<30	1,100	1,900	3,000	0.10	-	Unable to collect samples due to snow on the ground	
13	Tonegawa River	Faishobashi Bridge		2013/1/24	Sunny	Loamy	<30	580	1,100	1,680	0.10	Loamy	<30	420	720	1,140	0.10	-	Unable to collect samples due to snow on the ground	
14	Takizawagawa River	Shimokizawabashi Bridge	Shibukawashi City/Yoshiakemachi Town	2013/1/24	Sunny	Loamy/skeletal	<30	160	290	450	0.06	Loamy	<30	160	310	470	0.07	-	Unable to collect samples due to snow on the ground	
15	Tonegawa River	Gunmaebashi Bridge	Maebashishi City	2013/1/24	Sunny	Loamy	<30	15	34	49	0.05	Loamy	<30	75	130	205	0.06	-	Unable to collect samples due to snow on the ground	
16		Fukushinabashi Bridge	Tamamuraamachi Town	2013/1/24	Sunny	Loamy	<30	40	88	128	0.06	Loamy	<30	49	87	136	0.07	-	Unable to collect samples due to snow on the ground	
17	Nagagawa River	Kamigondabashi Bridge	Takasakishi City	2013/1/23	Sunny	-	-	-	-	-	-	Loamy	<30	950	1,800	2,750	0.13	-	Unable to collect samples due to snow on the ground	
18	Karasugawa River	Karasugawabashi Bridge		2013/1/23	Sunny	Loamy	<30	130	240	370	0.10	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground	
19	Usaigawa River	Nakasubashi Bridge	Anakashi City	2013/1/31	Sunny	Loamy	<30	110	210	320	0.17	Loamy	<30	230	400	630	0.14	-	Unable to collect samples due to snow on the ground	
20		Hanatsubashi Bridge	Takasakishi City	2013/1/23	Sunny	Loamy	<30	93	180	273	0.06	Loamy	<30	150	270	420	0.08	-	Unable to collect samples due to snow on the ground	
21	Kaburagawa River	Tadikawabashi Bridge	Tomokashi City/Shimontamachi Town	2013/1/31	Sunny	Loamy	<30	88	140	228	0.11	Loamy	<30	310	570	880	0.15	-	Unable to collect samples due to snow on the ground	
22		Kaburagawabashi Bridge	Takasakishi City/Fujikashi City	2013/1/23	Cloudy	Loamy	<30	32	67	99	0.05	Loamy	<30	28	43	71	0.05	-	Unable to collect samples due to snow on the ground	
23	Ogawa River	Kanzabashi Bridge	Kanmachi Town	2013/1/31	Sunny	Loamy	<30	58	120	178	0.08	Loamy	<30	200	330	530	0.09	-	Unable to collect samples due to snow on the ground	
24	Nannokogawa River	Ozawabashi Bridge	Nannokumura Village	2013/1/31	Sunny	Loamy	<30	170	310	480	0.09	Loamy	<30	330	600	930	0.11	-	Unable to collect samples due to snow on the ground	
25	Someyagawa River	Yakushibashi Bridge	Shintomura Village	2013/1/30	Sunny	Loamy	<30	290	570	860	0.07	Loamy	<30	140	260	400	0.06	-	Unable to collect samples due to snow on the ground	
26	Inogawa River	Kamakurabashi Bridge	Takasakishi City	2013/1/23	Cloudy	Loamy	<30	44	90	134	0.05	Loamy	<30	51	93	144	0.06	-	Unable to collect samples due to snow on the ground	
27	Karasugawa River	Iwakurabashi Bridge	Tamamuraamachi Town	2013/1/23	Cloudy	Loamy/skeletal	<30	61	120	181	0.06	Loamy	<30	37	71	108	0.06	-	Unable to collect samples due to snow on the ground	
28		Shinkanabeshashi Bridge	Uenomura Village	2013/1/31	Sunny	Sandy	<30	240	450	690	0.10	Loamy	<30	140	240	380	0.10	-	Unable to collect samples due to snow on the ground	
29	Kannagawa River	Moritobashi Bridge	Kanmachi Town	2013/1/31	Sunny	Loamy	<30	120	220	340	0.08	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground	
30		Tobukyo Bridge	Fujikashi City/Kamikawamachi Town	2013/1/30	Sunny	Loamy/skeletal	<30	64	120	184	0.08	Loamy	<30	110	230	340	0.09	-	Unable to collect samples due to snow on the ground	
31		Kannagawabashi Bridge	Kamiatomachi Town	2013/1/30	Sunny	Loamy	<30	110	200	310	0.08	Loamy	<30	23	43	66	0.07	-	Unable to collect samples due to snow on the ground	
32	Tonegawa River	Bandoobashi Bridge	Iesakishi City/Honjoshi City	2013/1/31	Sunny	Loamy	<30	66	130	196	0.07	Loamy	<30	43	87	130	0.06	-	Unable to collect samples due to snow on the ground	
33	Akagishinakawa River	In Shimohosomachi Town		2013/1/30	Sunny	Loamy	<30	45	95	140	0.07	Loamy	<30	49	81	130	0.06	-	Unable to collect samples due to snow on the ground	
34	Momonokigawa River	Utsubobashi Bridge	Maebashishi City	2013/1/30	Sunny	Loamy/sandy	<30	37	77	114	0.06	Loamy	<30	130	220	350	0.08	-	Unable to collect samples due to snow on the ground	
35	Azotogawa River	Okuharabashi Bridge		2013/1/30	Sunny	Loamy/skeletal	<30	11	14	25	0.05	Loamy	<30	27	48	75	0.05	-	Unable to collect samples due to snow on the ground	
36	Kasukawa River	Hozumbashi Bridge	Iesakishi City	2013/1/31	Sunny	Loamy	<30	46	76	122	0.06	Loamy	<30	83	160	243	0.06	-	Unable to collect samples due to snow on the ground	
37	Hirosegawa River	Nakajimbashi Bridge		2013/1/31	Sunny	Loamy	<30	70	140	210	0.06	Loamy	<30	81	160	241	0.07	-	Unable to collect samples due to snow on the ground	
38	Tonegawa River	Tonozeki Weir	Chiyodamachi Town/Gyodashi City	2013/1/31	Sunny	Loamy	<30	91	170	261	0.08	Loamy	<30	190	310	500	0.10	-	Unable to collect samples due to snow on the ground	
39	Koguragawa River	Kayabashi Bridge		2013/2/5	Sunny	-	-	-	-	-	-	Loamy	<30	1,200	2,300	3,500	0.21	-	Unable to collect samples due to snow on the ground	
40	Watarasegawa River	Takatsudo	Kiryushi City	2013/2/4	Sunny, then cloudy	Loamy	<30	52	120	172	0.08	Loamy	<30	83	150	233	0.09	-	Unable to collect samples due to snow on the ground	
41			Intake for Akaiwayosui water channel		2013/2/7	Cloudy	Loamy	<30	120	220	340	0.09	Sandy	<30	34	67	101	0.08	-	Unable to collect samples due to snow on the ground
42	Tataragawa River	Ejinbashi Bridge	Ouramachi Town	2013/1/31	Sunny	Loamy	<30	140	260	400	0.08	Loamy	<30	120	200	320	0.07	-	Unable to collect samples due to snow on the ground	
43	Kiryugawa River	Kannonbashi Bridge		2013/2/5	Sunny	Loamy	<30	110	190	300	0.09	Loamy	<30	94	160	254	0.08	-	Unable to collect samples due to snow on the ground	
44		Sakabashi Bridge	Kiryushi City	2013/2/7	Sunny	Loamy	<30	43	87	130	0.08	Loamy	<30	48	92	140	0.09	-	Unable to collect samples due to snow on the ground	
45	Tsuruudagawa River	Jonuma Lake	Tatebayashishi City	2013/1/31	Sunny	Loamy	<30	51	96	147	0.08	Loamy/skeletal	<30	100	190	290	0.07	-	Unable to collect samples due to snow on the ground	
46	Yatagawa River	Togodabashi Bridge	Meiwamachi Town/Iwakuramachi Town	2013/1/31	Sunny	Loamy/skeletal	<30	110	190	300	0.08	Loamy/skeletal	<30	73	130	203	0.07	-	Unable to collect samples due to snow on the ground	

\*Samples for surrounding environment (soil) were generally collected from 5 points in 3m square in the river terrace, etc., and mixed. Depending on the site situation, factors, such as the area of sampling may be much smaller, may cause figures to vary significantly.

\*Air dose was measured with a survey meter, TCS-171 or TCS-172 of Hitachi-Aloka Medical, Ltd.

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

OLake and Headwater: Water Quality Monitoring Results

No.	Sampling point				Sampling date	Weather	Full depth m	General items					Concentration of radioactive material Bq/L			Remarks
	Point	Center	Surface layer	Lower layer				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	
T o n e g a w a  R i v e r  W a t e r  B o d y					Okutoneko Lake (Yagisawa Dam)	Center	Surface layer									2013/1/9
	Lower layer	-	-	-			-	-	-	-	-	-	-			
	Naramatako Lake (Naramata Dam)	Center	Surface layer	2013/1/9	-	-	-	-	-	-	-	-	-	Unable to collect samples due to freezing		
			Lower layer	-	-	-	-	-	-	-	-	-	-			
	Dogenko Lake (Sudagai Dam)	Center	Surface layer	2013/1/29	Snow	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground		
			Lower layer	-	-	-	-	-	-	-	-	-	-			
	Marunuma Lake (Marunuma Dam)	Center	Surface layer	2013/1/29	Sunny	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground		
			Lower layer	-	-	-	-	-	-	-	-	-	-			
	Fujiwarako Lake (Fujiwara Dam)	Center	Surface layer	2013/1/29	Snow	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground		
Lower layer			-	-	-	-	-	-	-	-	-	-				
Tanbarako Lake (Tanbara Dam)	Center	Surface layer	2013/1/28	Snow	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground			
		Lower layer	-	-	-	-	-	-	-	-	-	-				
Akayako Lake (Aimata Dam)	Center	Surface layer	2013/1/30	-	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground			
		Lower layer	-	-	-	-	-	-	-	-	-	-				
Sonoharako Lake (Sonohara Dam)	Center	Surface layer	2013/1/30	Sunny	-	-	-	-	-	-	-	-	Unable to collect samples due to freezing			
		Lower layer	-	-	-	-	-	-	-	-	-	-				
Akagonuma Lake	Center	Surface layer	2013/1/30	-	-	-	-	-	-	-	-	-	Unable to collect samples due to freezing			
		Lower layer	-	-	-	-	-	-	-	-	-	-				
10	W a t e r B o d y	Okushimako Lake (Shimagawa Dam)	Center	Surface layer	2013/1/21	Cloudy	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground		
				Lower layer	-	-	-	-	-	-	-	-	-			
11	R i v e r B o d y	Shimako Lake (Nakanajo Dam)	Center	Surface layer	2013/1/21	Cloudy	7.9	0.5	32	<1	1	<1	<1			
				Lower layer	-	-	-	6.9	7.9	42	6	2	<1	<1	<1	
12	B o d y	Tashiroko Lake (Kazawa Dam)	Center	Surface layer	2013/3/3	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground		
				Lower layer	-	-	-	-	-	-	-	-	-	-		
13	K a r W a t e r B o d y	Harunako Lake	Center	Surface layer	2013/1/22	Snow	-	-	-	-	-	-	-	Unable to collect samples due to freezing		
				Lower layer	-	-	-	-	-	-	-	-	-	-		
14	W a t e r B o d y	Kirizumiko Lake (Kirizumi Dam)	Center	Surface layer	2013/1/22	Cloudy	-	-	-	-	-	-	-	Unable to collect samples due to freezing		
				Lower layer	-	-	-	-	-	-	-	-	-	-		
15	R i v e r	Usuiko Lake (Sakamoto Dam)	Center	Surface layer	2013/1/22	Sunny	-	-	-	-	-	-	-	Unable to collect samples due to freezing		
				Lower layer	-	-	-	-	-	-	-	-	-	-		
16	B o d y	Arafuneko Lake (Dodairagawa Dam)	Center	Surface layer	2013/1/24	Sunny	34.8	0.5	45	1	2	<1	<1	<1		
				Lower layer	-	-	-	33.8	2.8	48	2	2	<1	<1	<1	
17	R i v e r	Oshioke Lake (Oshio Dam)	Center	Surface layer	2013/1/24	Sunny	11.5	0.5	31	2	2	<1	<1	<1		
				Lower layer	-	-	-	10.5	3.6	33	<1	1	<1	<1	<1	
18	W a t e r	Kannako Lake (Shimokubo Dam)	Center	Surface layer	2013/1/25	Sunny	73.5	0.5	21	1	1	<1	<1	<1		
				Lower layer	-	-	-	72.5	3.9	22	9	11	<1	<1	<1	
19	B o d y	Hebikamiko Lake (Shiozawa Dam)	Center	Surface layer	2013/1/25	-	-	-	-	-	-	-	-	Unable to collect samples due to freezing		
				Lower layer	-	-	-	-	-	-	-	-	-	-		
20	Watarasegawa River Water Body	Kusakiko Lake (Kusaki Dam)	Center	Surface layer	2013/2/12	Sunny	41.7	0.5	13	<1	1	<1	<1	<1		
				Lower layer	-	-	-	40.7	4.9	13	8	3	<1	<1	<1	
21	R i v e r	Umedako Lake (Kiryugawa Dam)	Center	Surface layer	2013/2/4	Rain, then cloudy	29.0	0.5	7	1	1	<1	<1	<1		
				Lower layer	-	-	-	28.0	3.2	7	2	2	<1	<1	<1	
22	Nakatsugawa River Water Body	Nozoriko Lake (Nozori Dam)	Center	Surface layer	2013/3/3	-	-	-	-	-	-	-	-	Road closed due to snow		
				Lower layer	-	-	-	-	-	-	-	-	-	-		

\*Collection points are listed from North to South.

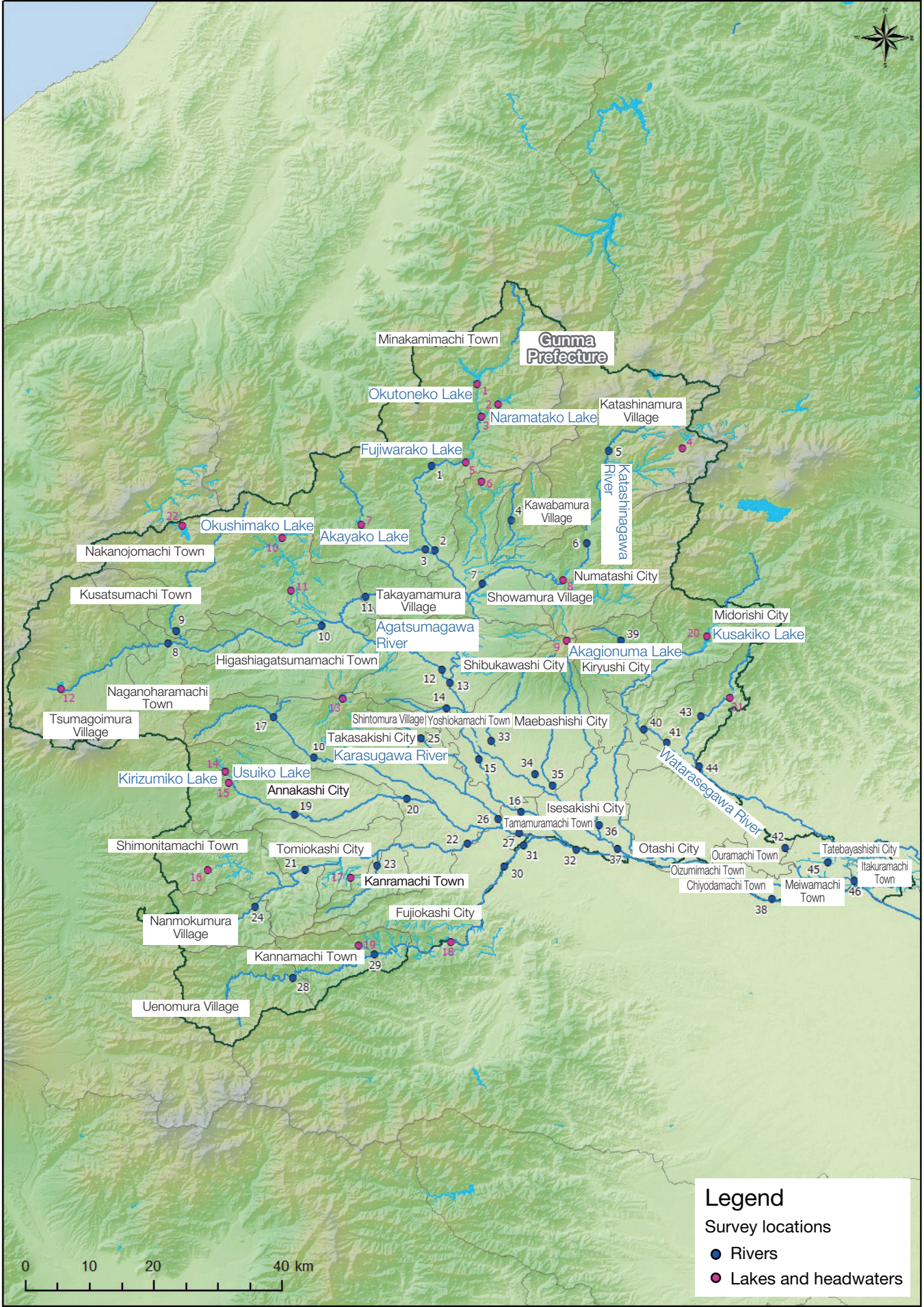
OLake and Headwater: Sediment and Surrounding Environment (Lake Shore) Monitoring Results

Sampling point			Sampling date	Weather	Full depth m	Sediment							Surrounding environment (lake shore)					Remarks	
						General items			Concentration of radioactive material Bq/kg (dried mud)				Property	Soil					
No.	Point		Mud sampling depth cm	Mud content %	Property	Radioactive iodine I-131	Cs-134	Cs-137	Total	Radioactive iodine I-131	Cs-134	Cs-137		Total	Air dose µSv/h				
1	T o n e g a w a  B o d y c e r	Okutoneko Lake (Yagisawa Dam)	Center	2013/1/9	-	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to freezing		
2		Naramatako Lake (Naramata Dam)	Center	2013/1/9	-	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to freezing		
3		Dogenko Lake (Sudgani Dam)	Center	2013/1/29	Snow	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground		
4		Marunuma Lake (Marunuma Dam)	Center	2013/1/29	Sunny	-	-	-	-	-	-	-	-	-	-	-	Road closed due to snow		
5		Fujiwarako Lake (Fujiwara Dam)	Center	2013/1/29	Snow	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground		
6		Tanbarako Lake (Tanbara Dam)	Center	2013/1/28	Snow	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground		
7		Akayako Lake (Aimata Dam)	Center	2013/1/30	-	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground		
8		Sonoharako Lake (Sonohara Dam)	Center	2013/1/30	Sunny	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to freezing		
9		Akagiomuma Lake	Center	2013/1/30	-	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to freezing		
10	W R u A  B o d y c e r	Okushimako Lake (Shimagawa Dam)	Center	2013/1/21	Cloudy	-	-	-	-	-	-	-	-	-	-	-	Road closed due to snow		
11		Shimako Lake (Nakanojo Dam)	Center	2013/1/21	Cloudy	7.9	3	54	Sand/silt	<30	460	890	1,350	Loamy	<30	400	730	1,130	0.12
12		Tashiroko Lake (Kazawa Dam)	Center	2013/3/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground
13	R i v e r  B o d y c e r	Harunako Lake	Center	2013/1/22	Snow	-	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to freezing	
14		Kirizumiko Lake (Kirizumi Dam)	Center	2013/1/22	Cloudy	-	-	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to freezing
15		Usuiko Lake (Sakamoto Dam)	Center	2013/1/22	Sunny	-	-	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to freezing
16		Arafuneko Lake (Dodairagawa Dam)	Center	2013/1/24	Sunny	34.8	5	51	Silt	<30	89	150	239	-	-	-	-	-	-
17		Oshiokeo Lake (Oshio Dam)	Center	2013/1/24	Sunny	11.5	10	43	Silt	<30	110	200	310	Loamy	<30	280	550	830	0.12
18		Kannako Lake (Shimokubo Dam)	Center	2013/1/25	Sunny	73.5	5	57	Silt	<30	82	160	242	Loamy/skeletal	<30	69	130	199	0.06
19		Hebikamiko Lake (Shiozawa Dam)	Center	2013/1/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to freezing
20	Watarasegawa River Water Body	Kusakiko Lake (Kusaki Dam)	Center	2013/2/12	Sunny	41.7	5	50	Silt	<30	280	480	760	Loamy	<30	250	480	730	0.15
21		Umedako Lake (Kiriyugawa Dam)	Center	2013/2/4	Rain, then cloudy	29.0	10	41	Silt	<30	100	180	280	Loamy	<30	55	95	150	0.08
22	Nakatsugawa River Water Body	Nozoriko Lake (Nozori Dam)	Center	2013/3/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Road closed due to snow

\*Samples for surrounding environment (lake shore) were generally collected from 5 points in 3m square on the lake shore, etc., and mixed. Depending on the site situation, factors, such as the area of sampling may be much smaller, may cause figures to vary significantly.

\*Air dose was measured with a survey meter, TCS-171 or TCS-172 of Hitachi-Aloka Medical, Ltd.

\*Collection points are listed from North to South.



**Gunma Prefecture**

**Legend**

- Rivers
- Lakes and headwaters

0 10 20 40 km