

(News Release)
The Results of Radioactive Material Monitoring of the Surface Water Bodies
Within Gunma Prefecture
(July-October Samples)

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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 July 17-October 12, 2012 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

65 environmental reference points, etc. in the surface water bodies within Gunma Prefecture
(Rivers: 43 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

(* and ** denote the results of the previous surveys: * June-July 2012; ** November-December 2011)

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

Cs-134 + Cs-137: Not detectable (ND)-1Bq/L (*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 most locations, and generally remained constant. For lakes and headwaters, levels were within the range of the previous survey, with some variation in the fluctuation and concentrations.

(Rivers)

Cs-134 + Cs-137: ND-720Bq/kg (dried mud) (*ND-1,080Bq/kg (dried mud))

(Lakes and headwaters)

Cs-134 + Cs-137: 33- 4,100Bq/kg (dried mud) (** ND-4,600Bq/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
Rivers	41 (43)	2 (2)	0 (1)	0 (0)	0 (0)	0 (0)	0 (0)
Lakes and headwaters	6 (9)	6 (4)	2 (2)	1 (2)	2 (0)	1 (1)	4 (1)

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

(Rivers)

Cs-134 + Cs-137: 32-6,000Bq/kg (dry) (*17-4,300Bq/kg (dry))

Spatial dose: 0.05-0.39μSv/h

(Lakes and headwaters)

Cs-134 + Cs-137: 86-6,600Bq/kg (dry) (** 95-7,100Bq/kg (dry))

Spatial dose: 0.05-0.35μSv/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 Fukushima Prefecture, its neighboring prefectures, etc. (every 1-3 months).

ORiver: Water Quality Monitoring Results

(Annex)

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	Cs-134	Cs-137	
1	Tongawa River	Hiroebashi Bridge	Minakamimachi Town	2012/9/10	Sunny	1.5	0.0	>100	4	<1	1	<1	<1	<1	
2		Tsukiyonobashi Bridge		2012/8/7	Sunny	0.3	0.0	86	0	<1	0	<1	<1	<1	
				2012/8/29	Sunny	0.3	0.0	65	3	<1	1	<1	<1	<1	
				2012/9/27	Sunny	0.3	0.0	>100	9	<1	0	<1	<1	<1	
3	Akayagawa River	Kosodebashi Bridge		2012/9/10	Sunny	0.5	0.0	80	20	<1	0	<1	<1	<1	
				2012/8/7	Sunny	0.3	0.0	>100	1	2	1	<1	<1	<1	
4	Sakuragawa River	In Ooza Yachi	Kawabamura Village	2012/8/29	Sunny	0.4	0.0	>100	6	<1	0	<1	<1	<1	
				2012/9/27	Cloudy	0.2	0.0	>100	7	<1	0	<1	<1	<1	
5		Kirinekibashi Bridge	Katashinamura Village	2012/9/10	Sunny	0.2	0.0	>100	9	<1	0	<1	<1	<1	
		Tonemachitakatoya	Numata City	2012/8/7	Sunny	0.4	0.0	>100	1	<1	1	<1	<1	<1	
				2012/8/29	Sunny	0.1	0.0	>100	9	<1	0	<1	<1	<1	
				2012/9/28	Sunny	1.3	0.0	>100	10	<1	0	<1	<1	<1	
		Futabashi Bridge	Numata City/Showamura Village	2012/8/7	Sunny	1.0	0.0	79	1	2	1	<1	<1	<1	
				2012/8/29	Sunny	1.0	0.0	>100	12	<1	1	<1	<1	<1	
				2012/9/28	Sunny	0.8	0.0	>100	13	<1	1	<1	<1	<1	
8	Agatsumagawa River	Shimobashi Bridge	Naganoharamachi Town	2012/8/30	Sunny	0.5	0.0	30	21	18	6	<1	<1	<1	
9	Shirasagawa River	Shutatashi Bridge	Nakanojomachi Town	2012/9/27	Sunny	1.0	0.0	>100	18	<1	0	<1	<1	<1	
				2012/8/7	Sunny	0.2	0.0	>100	2	1	1	<1	<1	<1	
10	Agatsumagawa River	Downstream of Azumabashi Bridge	Higashiagatsumamachi Town	2012/8/30	Sunny	0.2	0.0	>100	22	<1	1	<1	<1	<1	
				2012/9/27	Sunny	0.3	0.0	45	32	11	5	<1	<1	<1	
11	Nakutagawa River	Tonodabashi Bridge	Takayamura Village	2012/9/11	Sunny	0.3	0.0	>100	12	1	0	<1	<1	<1	
				2012/7/17	Sunny	0.2	0.0	62	19	4	3	<1	<1	<1	
12	Agatsumagawa River	Agatsumabashi Bridge	Shibukawashi City	2012/8/8	Sunny	0.3	0.0	>100	2	<1	1	<1	<1	<1	
				2012/8/29	Sunny	0.4	0.0	>100	19	<1	1	<1	<1	<1	
				2012/7/17	Cloudy	0.9	0.0	87	8	3	1	<1	<1	<1	
13	Tongawa River	Taishobashi Bridge		2012/8/8	Sunny	0.5	0.0	>100	0	<1	0	<1	<1	<1	
				2012/8/31	Cloudy	0.3	0.0	83	9	<1	1	<1	<1	<1	
14	Takizawagawa River	Shimtakizawabashi Bridge	Yoshiokamachi Town	2012/9/12	Sunny	0.2	0.0	97	21	2	1	<1	<1	<1	
15	Tongawa River	Gunmaohashi Bridge	Maebashishi City	2012/9/11	Cloudy	0.5	0.0	48	18	3	1	<1	<1	<1	
16		Fukushinabashi Bridge	Tamamura Town	2012/9/13	Sunny	0.2	0.0	50	23	4	1	<1	<1	<1	
17	Nagagawa River	Kamigondabashi Bridge	Takasaki City	2012/9/11	Cloudy	0.3	0.0	89	12	<1	0	<1	<1	<1	
18	Karasugawa River	Karasugawabashi Bridge		2012/9/11	Cloudy	0.4	0.0	>100	11	<1	0	<1	<1	<1	
19	Usuigawa River	Nakasebashi Bridge	Amakashi City	2012/9/6	Cloudy	0.3	0.0	>100	17	<1	1	<1	<1	<1	
20		Hanatakabashi Bridge	Takasaki City	2012/9/19	Cloudy	0.2	0.0	>100	31	2	1	<1	<1	<1	
21	Kaburagawa River	Tadakawabashi Bridge	Tomikashi City/Shimonitama City	2012/9/19	Cloudy	0.5	0.0	>100	24	<1	0	<1	<1	<1	
22		Kaburagawabashi Bridge	Takasaki City/Fujiokashi City	2012/9/26	Sunny	0.5	0.0	88	26	4	2	<1	<1	<1	
23	Ogawa River	Kinzanbashi Bridge	Kanramachi Town	2012/9/12	Sunny	0.2	0.0	>100	15	2	0	<1	<1	<1	
24	Nannokugawa River	Ozawabashi Bridge	Nannokumura Village	2012/9/12	Sunny	0.2	0.0	>100	16	<1	0	<1	<1	<1	
25	Somayagawa River	Yakushibashi Bridge	Shintomura Village	2012/9/13	Sunny	0.2	0.0	85	20	3	1	<1	<1	<1	
26	Inogawa River	Kamakurabashi Bridge	Takasaki City	2012/9/11	Sunny	0.2	0.0	>100	28	4	1	<1	<1	<1	
27	Karasugawa River	Iwakurabashi Bridge		2012/9/12	Sunny	0.3	0.0	88	36	5	1	<1	<1	<1	
28		Shinkanmebashi Bridge	Uenomura Village	2012/9/12	Sunny	0.2	0.0	>100	16	<1	0	<1	<1	<1	
29	Kanagawa River	Motobashi Bridge	Kanramachi Town	2012/9/4	Sunny	0.5	0.0	>100	16	<1	0	<1	<1	<1	
30		Fubukyo Bridge	Fujiokashi City/Kamikawamachi Town	2012/9/3	Sunny	0.4	0.0	>100	17	<1	0	<1	<1	<1	
31		Kanagawabashi Bridge	Kamisatomachi Town	2012/9/12	Sunny	0.2	0.0	>100	21	<1	0	<1	<1	<1	
32	Tongawa River	Bandoobashi Bridge	Honjoshi City	2012/9/13	Sunny	0.4	0.0	67	22	5	1	<1	<1	<1	
33	Agagishirakawa River	In Shimohosomachi Town		2012/9/11	Rain	0.3	0.0	62	19	3	1	<1	<1	<1	
34	Mononokigawa River	Utsuboishi Bridge	Maebashishi City	2012/9/13	Sunny	0.2	0.0	63	26	3	1	<1	<1	<1	
35	Aratogawa River	Okaharabashi Bridge		2012/9/13	Sunny	0.4	0.0	78	27	3	1	<1	<1	<1	
36	Kasukawa River	Hozumibashi Bridge	Iesakashi City	2012/9/13	Sunny	0.5	0.0	84	28	3	1	<1	<1	<1	
37	Hirosegawa River	Nakajimbashi Bridge		2012/9/13	Sunny	0.6	0.0	76	25	4	1	<1	<1	<1	
38	Tongawa River	Toneozeki Weir	Chiyodamachi Town/Gyodashi City	2012/8/9	Sunny	0.7	0.0	35	2	6	2	<1	<1	<1	
39	Kogurogawa River	Kayanobashi Bridge	Kiryushi City	2012/8/8	Cloudy	0.4	0.0	>100	1	<1	0	<1	<1	<1	
40	Watarasegawa River	Takatsudo	Midorishi City	2012/9/20	Sunny	0.5	0.0	56	12	3	2	<1	<1	<1	
41		Intake for Akaiwayou water channel	Kiryushi City	2012/8/8	Sunny	0.5	0.0	>100	1	0	1	<1	<1	<1	
42	Kiryugawa River	Kannonbashi Bridge	Kiryushi City	2012/9/20	Sunny	0.4	0.0	>100	8	<1	1	<1	<1	<1	
43		Sakabashi Bridge		2012/8/8	Sunny	0.4	0.0	>100	1	1	0	<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	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 I-131	Radioactive cesium				
											Cs-134	Cs-137	Total		
1	Tonegawa River	Hiroebashi Bridge	Minakamimachi Town	2012/9/10	Sunny	1.5	5	92	Sand	<30	26	48	74		
		Tsukiyonobashi Bridge		2012/8/7	Sunny	0.3	7	93	Sand	<30	22	33	55		
				2012/8/29	Sunny	0.3	5	93	Sand	<30	18	36	54		
				2012/9/27	Sunny	0.3	3	93	Sand/gravel	<30	22	38	60		
				2012/9/10	Sunny	0.5	2	91	Sand/gravel	<30	15	27	42		
		Akayagawa River		Kosodebashi Bridge	Kawabamura Village	2012/8/7	Sunny	0.3	3	88	Sand	<30	87	140	227
				In Oozaya Yachi		2012/8/29	Sunny	0.4	4	72	Sand	<30	180	320	500
		Karinobashi Bridge				Katashinamura Village	2012/9/27	Cloudy	0.2	6	83	Sand	<30	99	180
				2012/9/10			Sunny	0.2	1	79	Sand	<30	65	94	159
		Katashinagawa River		Tonemachitakatoya		Numata City	2012/8/7	Sunny	0.4	5	93	Sand	<30	<10	<10
2012/8/29	Sunny		0.1				1	91	Sand	<30	<10	15	15		
Futabashi Bridge	Numata City>Showamura Village		2012/9/28	Sunny		1.3	7	95	Sand/gravel	<30	<10	<10	-		
			2012/8/7	Sunny		1.0	3	87	Sand	<30	35	61	96		
Agatsumagawa River	Shuntobashi Bridge	Naganoharamachi Town	2012/8/29	Sunny		1.0	4	81	Sand	<30	61	93	154		
			2012/9/28	Sunny		0.8	2	92	Sand	<30	20	27	47		
Shirasunagawa River	Shutatsubashi Bridge	Nakanojomachi Town	2012/8/30	Sunny	0.5	8	58	Silt	<30	77	110	187			
			2012/9/27	Sunny	1.0	2	87	Sand/gravel	<30	<10	12	12			
Agatsumagawa River	Downstream of Azumabashi Bridge	Higashigatsumamachi Town	2012/8/7	Sunny	0.2	2	95	Sand	<30	<10	<10	-			
			2012/8/30	Sunny	0.2	2	93	Sand	<30	<10	14	14			
Nakutagawa River	Tonodabashi Bridge	Takayamamura Village	2012/9/27	Sunny	0.3	5	93	Sand/gravel	<30	<10	14	14			
			2012/9/11	Sunny	0.3	3	87	Sand	<30	32	49	81			
Agatsumagawa River	Agatsumabashi Bridge	Shibukawashi City	2012/7/17	Sunny	0.2	3	84	Sand	<30	14	23	37			
			2012/8/8	Sunny	0.3	3	75	Sand	<30	70	100	170			
			2012/8/29	Sunny	0.4	4	67	Mud	<30	240	370	610			
			2012/7/17	Cloudy	0.9	2	94	Sand	<30	<10	15	15			
Tonegawa River	Taishobashi Bridge	Shibukawashi City	2012/8/8	Sunny	0.5	10	88	Sand	<30	23	33	56			
			2012/8/31	Cloudy	0.3	5	85	Sand	<30	25	44	69			
			2012/9/12	Sunny	0.2	3	93	Sand/gravel	<30	20	30	50			
			2012/7/17	Cloudy	0.9	2	94	Sand	<30	<10	15	15			
Takizawagawa River	Shintakizwabashi Bridge	Yoshiokamachi Town	2012/9/12	Sunny	0.2	3	93	Sand/gravel	<30	20	30	50			
Tonegawa River	Gunmachashi Bridge	Maebashishi City	2012/9/11	Cloudy	0.5	2	96	Sand/gravel	<30	<10	<10	-			
			2012/9/13	Sunny	0.2	3	90	Sand	<30	18	25	43			
Nagagawa River	Karasugawabashi Bridge	Takasaki City	2012/9/11	Cloudy	0.3	3	92	Sand/gravel	<30	39	68	107			
			2012/9/11	Cloudy	0.4	2	86	Sand/gravel	<30	19	32	51			
			Usugawa River	Nakabashi Bridge	Annakashi City	2012/9/6	Cloudy	0.3	3	91	Sand/gravel	<30	44	76	120
						2012/9/19	Cloudy	0.2	3	82	Sand	<30	30	52	82
			Kaburagawa River	Fadarakawabashi Bridge	Tomokashi City/Shimontamachi Town	2012/9/19	Cloudy	0.5	3	93	Sand	<30	11	18	29
						2012/9/26	Sunny	0.5	3	91	Sand/gravel	<30	12	26	38
			Ogawa River	Kanzanbashi Bridge	Kanramachi Town	2012/9/12	Sunny	0.2	3	93	Gravel	<30	32	58	90
						2012/9/12	Sunny	0.2	2	94	Gravel	<30	<10	10	10
			Nanmokogawa River	Ozawabashi Bridge	Nanmokumura Village	2012/9/13	Sunny	0.2	3	86	Sand	<30	49	84	133
						2012/9/13	Sunny	0.2	3	86	Sand	<30	49	84	133
Inogawa River	Kamakurabashi Bridge	Takasaki City	2012/9/11	Sunny	0.2	3	94	Sand/gravel	<30	<10	12	12			
			2012/9/12	Sunny	0.3	2	59	Mud	<30	280	440	720			
Karasugawa River	Iwakurabashi Bridge	Uenomura Village	2012/9/12	Sunny	0.2	1	93	Sand/gravel	<30	<10	<10	-			
			2012/9/12	Sunny	0.2	1	93	Sand/gravel	<30	<10	<10	-			
Kannagawa River	Morinobashi Bridge	Kannamachi Town	2012/9/4	Sunny	0.5	3	94	Sand	<30	<10	<10	-			
			2012/9/3	Sunny	0.4	3	93	Sand	<30	<10	<10	-			
	Tobukyo Bridge	Fujikashi City/Kannakawamachi Town	2012/9/12	Sunny	0.2	2	94	Gravel	<30	<10	<10	-			
			2012/9/12	Sunny	0.2	2	94	Gravel	<30	<10	<10	-			
Tonegawa River	Bandoobashi Bridge	Hojoshi City	2012/9/13	Sunny	0.4	3	93	Sand	<30	<10	<10	-			
			2012/9/11	Rain	0.3	6	80	Silt	<30	27	51	78			
			Aragawa River	Okuharabashi Bridge	Maebashishi City	2012/9/13	Sunny	0.2	2	93	Sand/gravel	<30	<10	14	14
						2012/9/13	Sunny	0.4	5	80	Sand	<30	<10	13	13
			Kasukawa River	Hozumibashi Bridge	Issakishi City	2012/9/13	Sunny	0.5	3	93	Sand/gravel	<30	<10	18	18
						2012/9/13	Sunny	0.6	3	85	Sand	<30	17	24	41
			Tonegawa River	Tonezoki Weir	Chiyodamachi Town/Gyodashi City	2012/8/9	Sunny	0.7	10	69	Sand	<30	110	170	280
						2012/8/8	Cloudy	0.4	10	88	Sand	<30	78	120	198
			Wataragawa River	Takatsudo	Midorishi City	2012/9/20	Sunny	0.5	3	90	Sand	<30	24	32	56
						2012/8/8	Sunny	0.5	5	86	Sand	<30	29	37	66
Intake for Akaiwayosui water channel	Karyushi City	2012/9/20				Sunny	0.4	3	87	Sand	<30	49	79	128	
		2012/8/8				Sunny	0.4	3	89	Sand	<30	53	87	140	

*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.	Water body	Point	Municipality	Sampling date	Weather	Property	Left bank				Air dose μ Sv/h	Property	Right bank				Air dose μ Sv/h	Remarks
							Concentration of radioactive material Bq/kg (dry)						Concentration of radioactive material Bq/kg (dry)					
							Radioactive iodine	Cs-134	Cs-137	Total			Radioactive iodine	Cs-134	Cs-137	Total		
1	Tonegawa River	Hiroebashi Bridge	Minakanimachi Town	2012/9/10	Sunny	Loamy	<30	640	1,100	1,740	0.28	Loamy	<30	750	1,200	1,950	0.26	
				2012/8/7	Sunny	Loamy	<30	120	200	320	0.14	Loamy	<30	230	360	590	0.12	
2	Tonegawa River	Tsukiyonobashi Bridge	Minakanimachi Town	2012/8/29	Sunny	Loamy	<30	180	300	480	0.11	Loamy	<30	230	380	610	0.11	
				2012/9/27	Sunny	Loamy	<30	200	350	550	0.13	Loamy	<30	350	600	950	0.13	
3	Akayagawa River	Kosodebashi Bridge	Kawaburuma Village	2012/9/10	Sunny	Loamy	<30	330	510	840	0.08	Loamy	<30	120	210	330	0.11	
				2012/8/7	Sunny	Loamy	<30	730	1,300	2,030	0.39	Loamy	<30	450	770	1,220	0.39	
4	Sakuragawa River	In Oozaya Yachi	Kawaburuma Village	2012/8/29	Sunny	Loamy	<30	2,300	3,700	6,000	0.31	Loamy	<30	570	890	1,460	0.25	
				2012/9/27	Cloudy	Loamy	<30	1,900	3,100	5,000	0.35	Loamy	<30	730	1,200	1,930	0.28	
5	Katsushiragawa River	Karinobashi Bridge	Kafashimamura Village	2012/9/10	Sunny	Loamy	<30	180	260	420	0.13	Loamy	<30	760	1,300	2,060	0.15	
				2012/8/7	Sunny	Sandy	<30	21	41	62	0.09	Leaf modd	<30	300	490	790	0.14	
6	Katsushiragawa River	Tonemachitakatoya	Numata City	2012/8/29	Sunny	Sandy	<30	23	40	63	0.10	Sandy	<30	200	320	520	0.11	
				2012/9/28	Sunny	Loamy	<30	300	490	790	0.13	Sandy	<30	19	37	56	0.13	
7	Katsushiragawa River	Futaebashi Bridge	Numata City/Showamura Village	2012/8/7	Sunny	Loamy	<30	640	1,100	1,740	0.11	Loamy	<30	250	410	660	0.12	
				2012/8/29	Sunny	Loamy	<30	580	920	1,500	0.09	Loamy	<30	210	330	540	0.12	
8	Agatsumagawa River	Shintobashi Bridge	Nagashirayama Town	2012/9/10	Sunny	Loamy	<30	920	1,600	2,520	0.10	Loamy	<30	380	640	1,020	0.10	
				2012/8/30	Sunny	Loamy	<30	76	110	186	0.06	Loamy/sandy	<30	61	92	153	0.08	
9	Shiratsugawa River	Shuttatubashi Bridge	Nakanomachi Town	2012/9/27	Sunny	Loamy	<30	140	210	350	0.08	Loamy	<30	83	140	223	0.09	
				2012/8/7	Sunny	Loamy	<30	410	690	1,100	0.21	Loamy	<30	310	490	800	0.10	
10	Agatsumagawa River	Downstream of Azumabashi Bridge	Higashitagatsumachi Town	2012/8/30	Sunny	Loamy	<30	500	800	1,300	0.11	Loamy	<30	280	460	740	0.17	
				2012/9/27	Sunny	Loamy	<30	240	410	650	0.12	Loamy	<30	25	40	65	0.08	
11	Nakatagawa River	Tonobashi Bridge	Takayamamura Village	2012/9/11	Sunny	Loamy	<30	360	570	930	0.11	Loamy	<30	200	340	540	0.08	
				2012/7/17	Sunny	Loamy	<30	440	720	1,160	0.09	Leaf modd	<30	250	370	620	0.12	
12	Agatsumagawa River	Agatsumabashi Bridge	Shibukawashi City	2012/8/8	Sunny	Loamy	<30	460	750	1,210	0.12	Loamy	<30	530	850	1,380	0.14	
				2012/8/29	Sunny	Loamy	<30	890	1,400	2,290	0.10	Loamy	<30	630	1,000	1,630	0.09	
13	Tonegawa River	Taishobashi Bridge	Shibukawashi City	2012/7/17	Cloudy	Loamy	<30	160	280	440	0.11	Loamy	<30	72	110	182	0.08	
				2012/8/8	Sunny	Loamy	<30	270	410	680	0.15	Loamy	<30	160	240	400	0.12	
14	Fakizawagawa River	Shintakizawabashi Bridge	Yoshiokamachi Town	2012/8/31	Cloudy	Sandy	<30	250	420	670	0.12	Loamy	<30	180	300	480	0.08	
				2012/9/12	Sunny	Loamy	<30	470	760	1,230	0.07	Sandy	<30	34	63	97	0.07	
15	Tonegawa River	Gumabashi Bridge	Maebashi City	2012/9/11	Cloudy	Loamy	<30	10	22	32	0.05	Loamy	<30	95	160	255	0.07	
				2012/9/13	Sunny	Loamy	<30	57	110	167	0.06	Loamy	<30	28	46	74	0.06	
16	Fukushimabashi Bridge	Tamamuramachi Town	Takasaki City	2012/9/11	Cloudy	Loamy	<30	400	680	1,080	0.13	Loamy	<30	500	870	1,370	0.16	
				2012/9/11	Cloudy	Loamy	<30	290	450	740	0.12	Loamy	<30	800	1,300	2,100	0.15	
17	Nagagawa River	Kamigodabashi Bridge	Takasaki City	2012/9/11	Cloudy	Loamy	<30	430	700	1,130	0.17	Loamy/skeletal	<30	280	460	740	0.16	
				2012/9/19	Cloudy	Loamy	<30	91	160	251	0.08	Loamy	<30	180	290	470	0.08	
18	Karasugawa River	Karasugawabashi Bridge	Takasaki City	2012/9/19	Cloudy	Loamy	<30	130	190	320	0.10	Loamy/sandy	<30	240	430	670	0.14	
				2012/9/26	Sunny	Loamy	<30	92	140	232	0.06	Loamy	<30	56	110	166	0.06	
19	Usugawa River	Nakabashi Bridge	Annaka City	2012/9/19	Cloudy	Loamy	<30	150	250	400	0.08	Loamy	<30	190	310	500	0.08	
				2012/9/19	Cloudy	Loamy	<30	150	250	400	0.08	Loamy	<30	190	310	500	0.08	
20	Kabusugawa River	Yakubashi Bridge	Tomikoshi City/Shimomachi Town	2012/9/19	Cloudy	Loamy	<30	130	190	320	0.10	Loamy/sandy	<30	240	430	670	0.14	
				2012/9/26	Sunny	Loamy	<30	92	140	232	0.06	Loamy	<30	56	110	166	0.06	
21	Kabusugawa River	Kaburagawabashi Bridge	Takasaki City/Fujikoshi City	2012/9/12	Sunny	Loamy	<30	150	250	400	0.08	Loamy	<30	190	310	500	0.08	
				2012/9/12	Sunny	Loamy	<30	150	250	400	0.08	Loamy	<30	190	310	500	0.08	
22	Ogawa River	Kanzabashi Bridge	Kanamachi Town	2012/9/12	Sunny	Loamy	<30	240	400	640	0.09	Loamy	<30	350	550	900	0.12	
				2012/9/12	Sunny	Loamy	<30	240	400	640	0.09	Loamy	<30	350	550	900	0.12	
23	Nanmokuogawa River	Ozawabashi Bridge	Nanmokuura Village	2012/9/13	Sunny	Loamy	<30	350	530	880	0.06	Loamy	<30	130	210	340	0.06	
				2012/9/13	Sunny	Loamy	<30	350	530	880	0.06	Loamy	<30	130	210	340	0.06	
24	Someyagawa River	Yakushibashi Bridge	Shintomura Village	2012/9/11	Sunny	Loamy	<30	39	64	103	0.05	Loamy	<30	43	82	125	0.07	
				2012/9/12	Sunny	Loamy	<30	73	120	193	0.06	Loamy	<30	74	120	194	0.06	
25	Inogawa River	Kamakurabashi Bridge	Takasaki City	2012/9/12	Sunny	Loamy	<30	190	290	480	0.10	Loamy	<30	140	200	340	0.09	
				2012/9/11	Sunny	Loamy	<30	39	64	103	0.05	Loamy	<30	43	82	125	0.07	
26	Karasugawa River	Iwakurabashi Bridge	Takasaki City	2012/9/12	Sunny	Loamy	<30	73	120	193	0.06	Loamy	<30	74	120	194	0.06	
				2012/9/12	Sunny	Loamy	<30	190	290	480	0.10	Loamy	<30	140	200	340	0.09	
27	Karasugawa River	Shinkamabashi Bridge	Uenomura Village	2012/9/12	Sunny	Loamy	<30	130	190	320	0.10	Loamy/skeletal	<30	39	70	109	0.08	
				2012/9/4	Sunny	Loamy	<30	130	220	350	0.09	Sandy/skeletal	<30	39	70	109	0.08	
28	Karasugawa River	Tobakyo Bridge	Kamikawamachi Town	2012/9/3	Sunny	Loamy/skeletal	<30	94	150	244	0.08	Loamy/skeletal	<30	150	250	400	0.09	
				2012/9/12	Sunny	Loamy	<30	85	140	225	0.06	Loamy	<30	37	68	105	0.06	
29	Karasugawa River	Kamagawabashi Bridge	Kamiatomachi Town	2012/9/13	Sunny	Loamy	<30	63	120	183	0.08	Loamy	<30	43	65	108	0.08	
				2012/9/11	Rain	Loamy	<30	160	280	440	0.07	Loamy	<30	44	87	131	0.07	
30	Tonegawa River	Bandoabashi Bridge	Honjoshi City	2012/9/13	Sunny	Loamy	<30	63	120	183	0.08	Loamy	<30	43	65	108	0.08	
				2012/9/11	Rain	Loamy	<30	160	280	440	0.07	Loamy	<30	44	87	131	0.07	
31	Tonegawa River	Akagishirakawa River	In Shimohosonimachi Town	2012/9/11	Rain	Loamy	<30	160	280	440	0.07	Loamy	<30	44	87	131	0.07	
				2012/9/13	Sunny	Loamy	<30	100	170	270	0.07	Loamy	<30	61	120	181	0.07	
32	Momonokigawa River	Usubobashi Bridge	Maebashi City	2012/9/13	Sunny	Loamy	<30	100	170	270	0.07	Loamy	<30	61	120	181	0.07	
				2012/9/13	Sunny	Loamy	<30	27	62	89	0.05	Loamy	<30	38	82	120	0.05	
33	Aragawa River	Okuharabashi Bridge	Maebashi City	2012/9/13	Sunny	Loamy	<30	27	62	89	0.05	Loamy	<30	38	82	120	0.05	
				2012/9/13	Sunny	Loamy	<30	68	100	168	0.06	Loamy	<30	94	170	264	0.06	
34	Kasukawa River	Hozurabashi Bridge	Izassaki City	2012/9/13	Sunny	Loamy	<30	68	100	168	0.06	Loamy	<30	94	170	264	0.06	
				2012/9/13	Sunny	Loamy	<30	61	110	171	0.07	Loamy	<30	130	200	330	0.07	
35	Hirosegawa River	Nakajimbashi Bridge	Nakajimbashi Town	2012/9/13	Sunny	Loamy	<30	61	110	171	0.07	Loamy	<30	130	200	330	0.07	
				2012/8/9	Sunny	Loamy	<30	140	230	370	0.08	Loamy	<30	100	170	270	0.08	
36																		

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				Sampling depth m	Secchi disk depth m	Electrical conductivity mS/m	SS mg/L	Turbidity	Radioactive iodine I-131	Radioactive cesium Cs-134	Radioactive cesium Cs-137			
																Lower layer	Lower layer
1	T o n e g a w a r i v e r	Okunoko Lake (Yagisawa Dam)	Surface layer	2012/7/18	Sunny	76.4	0.5	9.7	2	1	1	<1	<1	<1			
			Lower layer				75.4	2	14	4	<1	<1	<1				
			Surface layer	2012/9/10	Sunny	54.8	0.5	1.5	4	1	1	<1	<1	<1			
2		B o d y	Naramatako Lake (Naramata Dam)	Surface layer	2012/7/18	Cloudy	96.4	0.5	2.4	3	<1	1	<1	<1	<1		
				Lower layer				95.4	5	2	3	<1	<1	<1			
				Surface layer	2012/9/11	Sunny	13.3	0.5	0.7	5	3	3	<1	<1	<1		
3			W a t e r	Dogenko Lake (Subagai Dam)	Surface layer	2012/7/17	Sunny	45.0	0.5	1.7	3	<1	1	<1	<1	<1	
					Lower layer				44.0	3	51	12	<1	<1	<1		
					Surface layer	2012/9/12	Light rain	43.4	0.5	1.8	3	<1	1	<1	<1	<1	
4	B o d y			Marunuma Lake (Marunuma Dam)	Surface layer	2012/8/27	Cloudy, then sunny	41.4	0.5	6.0	7	<1	0	<1	<1	<1	
					Lower layer				40.4	12	5	3	<1	<1	<1		
					Surface layer	2012/10/2	Light rain	44.0	0.5	5.7	5	<1	0	<1	<1	<1	
5		B o d y		Fujiwarako Lake (Fujiwara Dam)	Surface layer	2012/7/19	Sunny	48.7	0.5	6.3	3	5	3	<1	<1	<1	
					Lower layer				47.7	31	55	19	<1	<1	<1		
					Surface layer	2012/9/12	Sunny	51.0	0.5	2.2	3	<1	1	<1	<1	<1	
6			B o d y	Tanbarako Lake (Tanbara Dam)	Surface layer	2012/7/17	Sunny	39.6	0.5	5.0	3	<1	1	<1	<1	<1	
					Lower layer				38.6	3	37	11	<1	<1	<1		
					Surface layer	2012/9/11	Cloudy	39.5	0.5	4.0	3	<1	1	<1	<1	<1	
7	B o d y			Akayako Lake (Amata Dam)	Surface layer	2012/7/19	Sunny	29.6	0.5	3.3	8	<1	1	<1	<1	<1	
					Lower layer				28.6	5	370	180	<1	<1	<1		
					Surface layer	2012/9/13	Sunny	22.7	0.5	2.3	11	<1	1	<1	<1	<1	
8		B o d y		Sonoharako Lake (Sonohara Dam)	Surface layer	2012/8/7	Sunny	25.6	0.5	2.0	9	2	2	<1	<1	<1	
					Lower layer				24.6	9	9	3	<1	<1	<1		
					Surface layer	2012/9/14	Sunny	26.1	0.5	2.2	10	<1	1	<1	<1	<1	
9			B o d y	Akagionuma Lake	Surface layer	2012/7/20	Cloudy	14.9	0.5	7.2	10	13	6	<1	<1	<1	
					Lower layer				13.9	4	<1	1	<1	<1	<1		
					Surface layer	2012/9/18	Cloudy	15.1	0.5	4.4	4	<1	1	<1	<1	<1	
10	B o d y			Okushmako Lake (Shingawa Dam)	Surface layer	2012/8/30	Sunny	29.0	0.5	5.2	12	2	1	<1	<1	<1	
					Lower layer				28.0	16	<1	1	<1	<1	<1		
					Surface layer	2012/10/12	Sunny	28.3	0.5	8.4	9	<1	1	<1	<1	<1	
11		B o d y		Shimako Lake (Nakazono Dam)	Surface layer	2012/8/30	Sunny	8.8	0.5	4.0	23	<1	0	<1	<1	<1	
					Lower layer				7.8	18	<1	1	<1	<1	<1		
					Surface layer	2012/10/11	Sunny	8.1	0.5	6.4	15	<1	1	<1	<1	<1	
12			B o d y	Tanbarako Lake (Kozawa Dam)	Surface layer	2012/9/6	Light rain	3.4	0.5	1.6	8	2	1	<1	<1	<1	
					Lower layer				2.4	8	2	2	<1	<1	<1		
					Surface layer	2012/9/7	Sunny	14.3	0.5	8.6	9	<1	1	<1	<1	<1	
13	K a r a s t u e r			Harunoko Lake	Surface layer	2012/9/7	Sunny	14.3	0.5	8.6	10	5	7	<1	<1	<1	
					Lower layer				13.3	11	<1	1	<1	<1	<1		
					Surface layer	2012/9/19	Rain	12.7	0.5	2.7	11	<1	1	<1	<1	<1	
14		B o d y		Kiriumoko Lake (Kiriumoko Dam)	Surface layer	2012/9/19	Rain	12.7	0.5	2.7	12	1	1	<1	<1	<1	
					Lower layer				11.7	11	<1	1	<1	<1	<1		
					Surface layer	2012/9/19	Cloudy	12.7	0.5	2.3	11	<1	1	<1	<1	<1	
15			B o d y	Usaiko Lake (Sakamoto Dam)	Surface layer	2012/9/19	Cloudy	12.7	0.5	2.3	14	4	3	<1	<1	<1	
					Lower layer				11.7	14	4	3	<1	<1	<1		
					Surface layer	2012/9/4	Sunny	25.8	0.5	3.3	26	<1	1	<1	<1	<1	
16	B o d y			Arifunoko Lake (Dodairigawa Dam)	Surface layer	2012/9/4	Sunny	25.8	0.5	3.3	46	4	3	<1	<1	<1	
					Lower layer				24.8	46	4	3	<1	<1	<1		
					Surface layer	2012/8/31	Sunny	12.0	0.5	2.4	17	1	1	<1	<1	<1	
17		B o d y		Oshiko Lake (Oshio Dam)	Surface layer	2012/8/31	Sunny	12.0	0.5	2.4	16	1	1	<1	<1	<1	
					Lower layer				11.0	16	1	1	<1	<1	<1		
					Surface layer	2012/10/11	Sunny	13.9	0.5	3.3	16	<1	1	<1	<1	<1	
18			B o d y	Kamiko Lake (Shinokubo Dam)	Surface layer	2012/9/3	Sunny	66.0	0.5	1.4	16	<1	1	<1	<1	<1	
					Lower layer				65.0	18	9	6	<1	<1	<1		
					Surface layer	2012/9/4	Sunny	6.2	0.5	1.8	15	<1	1	<1	<1	<1	
19	B o d y			Hobikamiko Lake (Shizawa Dam)	Surface layer	2012/9/4	Sunny	6.2	0.5	1.8	17	4	5	<1	<1	<1	
					Lower layer				5.2	17	4	5	<1	<1	<1		
					Surface layer	2012/7/31	Sunny	18.3	0.5	2.1	9	<1	0	<1	<1	<1	
20		W a t e r		Kunakko Lake (Kunaki Dam)	Surface layer	2012/7/31	Sunny	18.3	0.5	2.1	10	<1	0	<1	<1	<1	
					Lower layer				17.3	10	<1	0	<1	<1	<1		
					Surface layer	2012/9/20	Rain	9.8	0.5	0.5	12	19	11	<1	<1	<1	
21			B o d y	Umedako Lake (Kiryugawa Dam)	Surface layer	2012/9/21	Rain	22.5	0.5	1.8	11	80	26	<1	<1	<1	
					Lower layer				8.8	11	80	26	<1	<1	<1		
					Surface layer	2012/9/5	Cloudy	15.3	0.5	5.3	3	<1	1	<1	<1	<1	
22	B o d y			Nakatogawa River Water Body	Surface layer	2012/9/5	Cloudy	15.3	0.5	5.3	3	<1	1	<1	<1	<1	
					Lower layer				14.3	3	2	1	<1	<1	<1		
					Surface layer	2012/10/10	Cloudy	19.1	0.5	3.4	3	<1	1	<1	<1	<1	
23		B o d y		Nakatogawa River Water Body	Surface layer	2012/10/10	Cloudy	19.1	0.5	3.4	3	<1	1	<1	<1	<1	
					Lower layer				18.1	3	2	1	<1	<1	<1		
					Surface layer	2012/10/10	Cloudy	19.1	0.5	3.4	3	<1	1	<1	<1	<1	

*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
No.	Point	Center	General items				Concentration of radioactive material Bq/kg (dried mud)				Property	Soil					Air dose μ Sv/h			
			Mud sampling depth cm				Mud content %	Property	Radioactive iodine I-131	Radioactive cesium			Radioactive iodine I-131	Concentration of radioactive material Bq/kg (dry)						
								Cs-134	Cs-137	Total			Cs-134	Cs-137	Total					
1	Tonegawa River	Okutoneko Lake (Yagisawa Dam)	Center	2012/7/18	Sunny	76.4	3	51	Silt	<30	480	770	1,250	Loamy	<30	250	390	640	0.21	
				2012/9/10	Sunny	54.8	5	54	Silt/clay	<30	810	1,400	2,210	Skeletal/loamy	<30	120	220	340	0.25	
2	Tonegawa River	Naramatako Lake (Naramata Dam)	Center	2012/7/18	Cloudy	96.4	3	47	Silt	<30	440	690	1,130	Sandy	<30	220	360	580	0.27	
				2012/9/11	Sunny	13.3	3	45	Silt	<30	1,200	2,200	3,400	Loamy/skeletal	<30	250	440	690	0.34	
3	Tonegawa River	Dogenko Lake (Sudagai Dam)	Center	2012/7/17	Sunny	45.0	10	52	Sludge	<30	360	610	970	Loamy	<30	110	180	290	0.20	
				2012/9/12	Light rain	43.4	3	52	Silt	<30	230	410	640	Loamy/skeletal	<30	160	280	440	0.25	
4	Tonegawa River	Marunuma Lake (Marunuma Dam)	Center	2012/8/27	Cloudy, then sunny	41.4	15	39	Sludge	<30	210	330	540	Loamy	<30	460	780	1,240	0.12	
				2012/10/2	Light rain	44.0	10	45	Silt	<30	32	66	98	Loamy	<30	25	61	86	0.14	
5	Tonegawa River	Fujiwarako Lake (Fujiwara Dam)	Center	2012/7/19	Sunny	48.7	5	44	Silt	<30	570	860	1,430	Loamy	<30	330	520	850	0.11	
				2012/9/12	Sunny	51.0	5	57	Silt	<30	1,100	1,800	2,900	Loamy/skeletal	<30	980	1,700	2,680	0.13	
6	Tonegawa River	Tanbarako Lake (Tanbara Dam)	Center	2012/7/17	Sunny	39.6	10	69	Sludge	<30	<10	33	33	Clayish	<30	2,500	4,100	6,600	0.24	
				2012/9/11	Cloudy	39.5	5	52	Silt	<30	320	540	860	Skeletal/loamy	<30	360	620	980	0.32	
7	Tonegawa River	Akayako Lake (Aimata Dam)	Center	2012/7/19	Sunny	29.6	5	56	Silt	<30	960	1,600	2,560	Loamy	<30	150	270	420	0.14	
				2012/9/13	Sunny	22.7	5	54	Silt	<30	1,500	2,300	3,800	Loamy	<30	300	480	780	0.15	
8	Tonegawa River	Sonoharako Lake (Sonohara Dam)	Center	2012/8/7	Sunny	25.6	5	56	Silt	<30	190	310	500	Loamy	<30	350	540	890	0.11	
				2012/9/14	Sunny	26.1	5	56	Silt	<30	180	310	490	Loamy	<30	320	490	810	0.13	
9	Tonegawa River	Akagionuma Lake	Center	2012/7/20	Cloudy	14.9	5	52	Sand	<30	40	64	104	Loamy	<30	460	760	1,220	0.11	
				2012/9/18	Cloudy	15.1	15	28	Mud	<30	540	860	1,400	Loamy	<30	100	170	270	0.10	
10	Tonegawa River	Okushimako Lake (Shimagawa Dam)	Center	2012/8/30	Sunny	29.0	8	57	Mud	<30	200	330	530	Loamy	<30	1,300	2,100	3,400	0.25	
				2012/10/12	Sunny	28.3	10	64	Silt	<30	660	1,100	1,760	Loamy	<30	790	1,300	2,090	0.28	
11	Tonegawa River	Shimako Lake (Nakanojo Dam)	Center	2012/8/30	Sunny	8.8	2	83	Sand	<30	36	58	94	Loamy	<30	240	380	620	0.12	
				2012/10/11	Sunny	8.1	3	61	Sand/silt	<30	420	700	1,120	Leaf mold	<30	560	980	1,540	0.13	
12	Tonegawa River	Tashiroko Lake (Kazawa Dam)	Center	2012/9/6	Light rain	3.4	15	35	Silt	<30	290	490	780	Loamy	<30	200	330	530	0.13	
13	Watarasegawa River	Harunako Lake	Center	2012/9/7	Sunny	14.3	5	22	Silt	<30	27	49	76	Loamy	<30	560	860	1,420	0.35	
14		Kirizumiko Lake (Kirizumi Dam)	Center	2012/9/19	Rain	12.7	15	44	Mud	<30	1,400	2,300	3,700	Loamy	<30	340	570	910	0.13	
15	Watarasegawa River	Usaiko Lake (Sakamoto Dam)	Center	2012/9/19	Cloudy	12.7	10	39	Mud	<31	1,600	2,500	4,100	Loamy	<30	340	520	860	0.11	
16	Watarasegawa River	Arafuneko Lake (Dodairagawa Dam)	Center	2012/9/4	Sunny	25.8	20	45	Silt	<30	150	240	390	Loamy	<30	140	210	350	0.11	
17	Watarasegawa River	Oshioke Lake (Oshio Dam)	Center	2012/8/31	Sunny	12.0	10	46	Sludge	<30	210	330	540	Loamy	<30	180	300	480	0.12	
				2012/10/11	Sunny	13.9	10	44	Sand/silt	<30	250	430	680	Loamy	<30	190	340	530	0.11	
18	Watarasegawa River	Kannako Lake (Shimokubo Dam)	Center	2012/9/3	Sunny	66.0	10	58	Silt	<30	83	130	213	Loamy/skeletal	<30	62	85	147	0.05	
19	Watarasegawa River	Hebikamiko Lake (Shozawa Dam)	Center	2012/9/4	Sunny	6.2	5	69	Silt/sand	<30	100	170	270	Loamy/skeletal	<30	84	150	234	0.10	
20	Watarasegawa River	Kusakiko Lake (Kusaki Dam)	Center	2012/7/31	Sunny	18.3	15	53	Silt	<30	900	1,500	2,400	Loamy	<30	230	370	600	0.15	
				2012/9/20	Rain	9.8	5	51	Mud	<30	77	130	207	Loamy	<30	330	570	900	0.17	
21	Watarasegawa River	Umedako Lake (Kiriyugawa Dam)	Center	2012/9/21	Rain	22.5	15	44	Mud	<30	50	79	129	Clayish/loamy	<30	120	200	320	0.09	
22	Nakatsugawa River	Nozoriko Lake (Nozori Dam)	Center	2012/9/5	Cloudy	15.3	3	43	Sand/silt	<30	210	340	550	Loamy/skeletal	<30	180	320	500	0.11	
				2012/10/10	Cloudy	19.1	15	45	Silt	<30	110	190	300	Loamy	<30	320	560	880	0.10	

* 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.

