

Results of 1998 Research on Effects of Endocrine Disrupting
Chemicals on Wildlife (Carp-1)

No.	Specimen collection site	Gender(M:Male, F:Female)		Weight	Overall length	Body length	Weight of gonad	Gonad-weight ratio	Videllogenin
		Age (A:Adult)							
Unit				kg	cm	cm	g	%	μ g/ml
1	Hamura-seki	M	A	0.66	38	30	3.0	0.46	< 0.10
2	Hamura-bashi	M	A	1.7	46	36	147	8.8	<0.10
3	Hamura-bashi	M	A	2.1	50	40	173	8.4	100
4	Hamura-bashi	M	A	2.6	57	45	219	8.3	<0.10
5	Hamura-bashi	M	A	2.3	52	42	170	7.4	40
6	Hamura-bashi	M	A	1.5	47	37	107	7.0	0.17
7	Hamura-bashi	M	A	2.4	56	45	159	6.6	<0.10
8	Hamura-bashi	M	A	3.4	63	50	226	6.6	<0.10
9	Hamura-bashi	M	A	2.7	58	48	168	6.3	<0.10
10	Hamura-bashi	M	A	2.7	56	45	165	6.0	<0.10
11	Hamura-bashi	M	A	2.9	60	48	169	5.9	19
12	Hamura-bashi	M	A	2.0	52	41	110	5.5	<0.10
13	Hamura-bashi	M	A	2.7	59	47	150	5.5	<0.10
14	Hamura-bashi	M	A	3.5	62	50	188	5.4	<0.10
15	Hamura-bashi	M	A	3.3	64	51	149	4.5	<0.10
16	Hamura-bashi	M	A	2.0	53	43	80	4.1	<0.10
17	Tamagawara-bashi	M	A	1.7	49	40	130	7.5	<0.10
18	Tamagawara-bashi	M	A	1.7	53	41	124	7.1	0.83
19	Tamagawara-bashi	M	A	2.0	57	44	62	3.1	<0.10
20	Tamagawara-bashi	M	A	1.6	48	37	40	2.5	<0.10
21	Denenchofu-seki	M	A	1.6	48	38	176	11	<0.10
22	Denenchofu-seki	M	A	2.7	57	45	233	8.6	2.4
23	Denenchofu-seki	M	A	2.5	56	45	188	7.6	<0.10
24	Denenchofu-seki	M	A	2.7	56	44	188	7.0	3.5
25	Denenchofu-seki	M	A	2.2	54	43	145	6.5	<0.10
26	Denenchofu-seki	M	A	2.8	58	47	180	6.4	<0.10
27	Denenchofu-seki	M	A	2.5	57	47	156	6.2	<0.10

* Source of the above date: "Results of 1998 Endocrine Disrupting Chemicals Surveillance at Public Water Areas" compiled by the Ministry of Construction

Results of 1998 Research on Effects of Endocrine Disrupting
Chemicals on Wildlife (Carp-2)

No.	Specimen collection site	Gender(M:Male, F:Female)		Weight	Overall length	Body length	Weight of gonad	Gonad-weight ratio	Vitellogenin	Estradiol	Testosterone
		Age (A:Adult)	Unit								
				kg	cm	cm	g	%	μ g/ml	pg/ml	ng/ml
28	Akikawa	M	A	2.7	62	51	204	7.5	0.072	1.1	1.1
29	Akikawa	M	A	2.2	54	42	162	7.3	<0.039	0	2.0
30	Akikawa	M	A	1.7	50	41	113	6.7	<0.039	0	2.7
31	Akikawa	M	A	3.0	61	48	190	6.3	<0.039	0	5.1
32	Akikawa	M	A	2.3	56	47	138	6.0	<0.039	0	2.9
33	Akikawa	M	A	2.1	52	43	124	5.9	<0.039	0	5.1
34	Akikawa	M	A	2.6	55	45	134	5.2	<0.039	0	1.3
35	Akikawa	M	A	2.9	62	50	143	4.9	<0.039	0	1.5
36	Akikawa	M	A	2.9	62	50	139	4.8	<0.039	0.48	1.5
37	Akikawa	M	A	2.4	58	48	98	4.1	<0.039	0	2.8
38	Akikawa	M	A	2.3	54	45	73	3.2	0.059	0	2.5
39	Akikawa	M	A	3.4	67	53	54	1.6	<0.039	0	0.85
40	Akikawa	M	A	1.9	49	41	19	1.0	6.9	1.0	1.6
41	Asaskawa	M	A	2.6	60	48	261	10	<0.039	44	1.6
42	Asaskawa	M	A	2.4	59	47	185	7.7	<0.039	54	1.2
43	Asaskawa	M	A	2.8	66	51	211	7.5	0.10	43	3.4
44	Asaskawa	M	A	1.3	45	36	89	6.8	<0.039	33	2.1
45	Asaskawa	M	A	3.0	63	51	204	6.8	<0.039	44	0.74
46	Asaskawa	M	A	2.8	63	50	190	6.8	<0.039	7.5	2.5
47	Asaskawa	M	A	2.2	56	47	140	6.4	2.1	22	0.63
48	Asaskawa	M	A	2.4	58	47	149	6.2	7.7	85	1.7
49	Asaskawa	M	A	1.8	56	46	100	5.6	<0.039	13	0.71
50	Asaskawa	M	A	1.9	54	45	104	5.5	<0.039	38	1.7
51	Asaskawa	M	A	3.5	66	54	188	5.4	<0.039	42	0.47
52	Asaskawa	M	A	2.6	65	52	128	4.9	<0.039	36	0.54
53	Asaskawa	M	A	2.7	63	52	130	4.8	<0.039	51	1.8
54	Inbanuma	M	A	1.5	46	39	114	7.6	<0.039	0	0.30
55	Inbanuma	M	A	4.6	73	59	243	5.3	<0.039	0	1.2
56	Inbanuma	M	A	1.8	52	44	94	5.2	<0.039	4.6	1.3
57	Inbanuma	M	A	2.2	58	47	109	5.0	<0.039	0.82	0.70
58	Inbanuma	M	A	2.2	59	47	94	4.3	<0.039	35	1.5
59	Inbanuma	M	A	2.1	56	46	67	3.2	<0.039	1.4	1.1
60	Inbanuma	M	A	3.4	65	55	100	2.9	1.1	23	1.1
61	Inbanuma	M	A	2.2	59	49	60	2.7	<0.039	0	0.74
62	Inbanuma	M	A	1.6	57	47	10	0.61	<0.039	0.13	0.22
63	Teganuma	M	A	1.5	48	41	166	11	<0.039	0	0.10
64	Teganuma	M	A	1.3	45	39	82	6.6	0.088	3.6	2.8
65	Teganuma	M	A	1.2	48	39	78	6.5	<0.039	0	1.2
66	Teganuma	M	A	0.70	44	36	38	5.4	2.5	0	0.32
67	Teganuma	M	A	0.80	42	36	27	3.3	<0.039	0	0.055
68	Teganuma	M	A	0.85	49	34	23	2.7	0.46	16	1.1
69	Teganuma	M	A	0.82	42	35	19	2.4	0.45	1.3	0.47
70	Teganuma	M	A	0.89	45	36	17	1.9	<0.039	2.5	0.42
71	Teganuma	M	A	1.4	48	40	14	1.1	9.0	0.36	0.45
72	Teganuma	M	A	0.90	45	37	8.2	0.91	<0.039	0	0.0050
73	Teganuma	M	A	0.85	45	37	3.1	0.36	<0.039	0	0
74	Teganuma	M	A	0.85	44	37	2.7	0.32	<0.039	0	0

Results of 1998 Research on Effects of Endocrine Disrupting
Chemicals on Wildlife (Carp-3)

No.	Specimen collection site	Gender(M:Male, F:Female)		Weight	Overall length	Body length	Weight of gonad	Gonad-weight ratio	Vitellogenin
		Age (A:Adult)							
Unit				kg	cm	cm	g	%	μg/ml
75	Hamura-seki	F	A	1.3	45	36	57	4.2	2,400
76	Hamura-seki	F	A	1.3	43	35	26	2.1	12
77	Hamura-seki	F	A	2.2	52	44	25	1.1	4.3
78	Hamura-seki	F	A	0.45	31	26	2.6	0.58	1.9
79	Haijima-bashi	F	A	2.9	57	45	462	16	7,700
80	Haijima-bashi	F	A	3.6	59	49	518	15	15,000
81	Haijima-bashi	F	A	5.3	70	57	758	14	3,600
82	Haijima-bashi	F	A	3.2	59	47	419	13	23,000
83	Haijima-bashi	F	A	2.3	56	46	57	2.5	150
84	Tamagawara-bashi	F	A	3.2	59	46	643	20	11,000
85	Tamagawara-bashi	F	A	2.3	55	44	400	17	5,000
86	Tamagawara-bashi	F	A	2.9	55	44	446	15	5,100
87	Tamagawara-bashi	F	A	1.6	51	39	229	15	5,000
88	Tamagawara-bashi	F	A	2.6	59	47	376	14	5,900
89	Tamagawara-bashi	F	A	1.7	50	40	236	14	9,800
90	Tamagawara-bashi	F	A	2.6	60	45	351	14	6,000
91	Tamagawara-bashi	F	A	2.1	57	44	276	13	2,100
92	Tamagawara-bashi	F	A	3.0	59	47	395	13	4,300
93	Tamagawara-bashi	F	A	2.9	62	48	275	9.4	2,000
94	Tamagawara-bashi	F	A	1.7	51	39	150	8.7	10,000
95	Tamagawara-bashi	F	A	2.9	58	47	235	8.3	5,400
96	Tamagawara-bashi	F	A	2.2	58	47	167	7.6	2,300
97	Denenchofu-seki	F	A	6.5	74	60	1,881	29	6,300
98	Denenchofu-seki	F	A	1.8	52	42	325	18	4,400
99	Denenchofu-seki	F	A	4.1	66	51	654	16	12,000
100	Denenchofu-seki	F	A	1.9	54	43	227	12	4,000
101	Denenchofu-seki	F	A	1.9	54	43	173	9.3	3,500
102	Denenchofu-seki	F	A	2.3	53	41	182	7.8	3,800

* Source of the above data: "Results of 1998 Endocrine Disrupting Chemicals Surveillance at Public Water Areas" compiled by the Ministry of Construction

Results of 1998 Research on Effects of Endocrine Disrupting
Chemicals on Wildlife (Carp-4)

No.	Specimen collection site	Gender(M:Male, F:Female)		Weight	Overall length	Body length	Weight of gonad	Gonad-weight ratio	Videllogenin	Estradiol	Testosterone
		Age (A:Adult)									
Unit				kg	cm	cm	g	%	μg/ml	pg/ml	ng/ml
103	Akikawa	F	A	3.5	62	52	550	16	9,400	290	4.3
104	Akikawa	F	A	3.5	66	52	497	14	2,800	230	2.7
105	Akikawa	F	A	2.3	59	47	308	13	4,500	160	2.2
106	Akikawa	F	A	3.2	62	52	358	11	3,200	190	1.3
107	Akikawa	F	A	3.5	65	52	325	9.3	4,200	64	1.8
108	Akikawa	F	A	1.9	49	40	60	3.2	96	2.7	0
109	Akikawa	F	A	1.7	51	42	19	1.1	1.3	0	0.039
110	Akikawa	F	A	1.1	43	35	5.2	0.47	4.5	0	0
111	Asakawa	F	A	2.8	61	48	622	22	1,500	230	1.9
112	Asakawa	F	A	2.8	60	50	398	14	380	190	1.6
113	Asakawa	F	A	2.3	55	45	326	14	1,100	290	0.88
114	Asakawa	F	A	3.5	72	57	459	13	1,900	230	1.4
115	Asakawa	F	A	3.3	63	52	406	12	1,400	390	0.93
116	Asakawa	F	A	2.9	60	49	336	12	11,000	420	1.5
117	Asakawa	F	A	2.8	61	50	214	7.6	150	34	0
118	Asakawa	F	A	2.2	59	47	128	5.8	36	19	0
119	Asakawa	F	A	2.7	62	50	153	5.7	420	8.4	0
120	Asakawa	F	A	3.2	66	54	75	2.3	2.7	10	0
121	Asakawa	F	A	2.6	66	54	51	2.0	1.3	29	0
122	Inbanuma	F	A	7.8	89	73	1152	15	2,700	1,200	1.8
123	Inbanuma	F	A	3.5	66	54	360	10	2,000	190	0.73
124	Inbanuma	F	A	2.5	60	49	194	7.8	1,900	110	0.28
125	Inbanuma	F	A	4.6	74	60	283	6.2	2,100	150	0.49
126	Inbanuma	F	A	4.0	70	58	164	4.1	190	1.3	0
127	Inbanuma	F	A	2.0	57	47	66	3.3	160	2.5	0.028
128	Inbanuma	F	A	2.3	56	44	75	3.3	75	3.7	0
129	Inbanuma	F	A	2.0	61	52	40	2.0	4.5	0	0
130	Inbanuma	F	A	2.0	58	48	35	1.8	4.0	0	0
131	Inbanuma	F	A	2.5	62	50	40	1.6	0.55	0	0
132	Inbanuma	F	A	1.6	59	46	23	1.4	1.0	0	0
133	Inbanuma	F	A	4.0	75	58	52	1.3	0.52	0	0
134	Inbanuma	F	A	3.5	71	59	44	1.3	0.28	0	0
135	Inbanuma	F	A	3.2	68	57	39	1.2	1.5	0	0
136	Inbanuma	F	A	2.1	60	51	20	0.95	<0.039	0.32	0.24
137	Inbanuma	F	A	2.5	66	53	20	0.82	2.0	0	0
138	Teganuma	F	A	1.4	46	39	159	11	2,000	360	1.7
139	Teganuma	F	A	1.6	51	43	170	11	4,100	180	0.42
140	Teganuma	F	A	1.5	50	42	90	5.9	530	69	0.49
141	Teganuma	F	A	1.1	46	38	53	5.0	1,300	0	0
142	Teganuma	F	A	0.80	43	37	21	2.6	1.7	0	0
143	Teganuma	F	A	1.2	49	41	27	2.3	15	0	0
144	Teganuma	F	A	0.95	45	38	18	1.9	33	0	0
145	Teganuma	F	A	1.0	39	34	4.0	0.40	12	0	0

Results of 1998 Research on Effects of Endocrine Disrupting
Chemicals on Wildlife (Carp-5)

(Concentration per wet weight)

		No.		1		2		3														
		SPEED'98 No.		2		4		12														
No.	Specimen collection site	Gender(M:Male, F:Female)	Age (A:Adult)	Specimen	Lipid	Polychlorinated biphenyls (PCBs)										Hexachlorobenzene (HCB)	Hexachlorocyclohexane					
						Chlorinated biphenyl	Dichloro biphenyl	Trichloro biphenyl	Tetrachloro biphenyl	Pentachloro biphenyl	Hexachloro biphenyl	Heptachloro biphenyl	Octachloro biphenyl	Nonachloro biphenyl	Decchloro biphenyl		PCB total*	α -HCH	β -HCH	γ -HCH	δ -HCH	HCH total*
		Unit		%		μ g/kg-wet																
1	Hamura-seki	M	A	Muscle	1.9	<0.10	<0.10	0.37	1.6	6.9	6.6	0.70	<0.10	<0.10	<0.10	16	<5	<5	<5	<5	<5	0
2	Haijima-bashi	M	A	Muscle	1.5	<0.10	<0.10	<0.10	3.8	10	13	2.4	0.16	<0.10	<0.10	29	<5	<5	<5	<5	<5	0
3	Haijima-bashi	M	A	Muscle	1.6	<0.10	<0.10	<0.10	8.8	7.8	19	3.6	<0.10	<0.10	<0.10	39	<5	<5	<5	<5	<5	0
4	Haijima-bashi	M	A	Muscle	1.4	<0.10	0.34	<0.10	4.3	19	16	2.9	0.39	<0.10	<0.10	43	<5	<5	<5	<5	<5	0
5	Haijima-bashi	M	A	Muscle	2.7	<0.10	<0.10	0.90	6.3	13	12	2.3	0.28	<0.10	<0.10	35	<5	<5	<5	<5	<5	0
6	Haijima-bashi	M	A	Muscle	1.9	<0.10	0.30	<0.10	4.7	7.8	6.9	0.82	<0.10	<0.10	<0.10	21	<5	<5	<5	<5	<5	0
7	Haijima-bashi	M	A	Muscle	2.3	<0.10	<0.10	<0.10	8.5	10	8.7	1.2	<0.10	<0.10	<0.10	28	<5	<5	<5	<5	<5	0
8	Haijima-bashi	M	A	Muscle	1.7	<0.10	<0.10	<0.10	2.6	4.2	4.6	0.58	<0.10	<0.10	<0.10	12	<5	<5	<5	<5	<5	0
9	Haijima-bashi	M	A	Muscle	2.1	<0.10	<0.10	<0.10	5.3	11	9.5	1.8	0.22	<0.10	<0.10	28	<5	<5	<5	<5	<5	0
10	Haijima-bashi	M	A	Muscle	2.1	<0.10	<0.10	<0.10	2.5	8.7	8.6	0.86	<0.10	<0.10	<0.10	21	<5	<5	<5	<5	<5	0
11	Haijima-bashi	M	A	Muscle	1.1	<0.10	<0.10	<0.10	2.1	3.2	3.3	0.63	<0.10	<0.10	<0.10	9.2	<5	<5	<5	<5	<5	0
12	Haijima-bashi	M	A	Muscle	1.3	<0.10	2.0	<0.10	2.2	15	11	1.1	<0.10	<0.10	<0.10	31	<5	<5	<5	<5	<5	0
13	Haijima-bashi	M	A	Muscle	3.6	<0.10	<0.10	1.5	13	18	16	2.2	0.40	<0.10	<0.10	51	<5	<5	<5	<5	<5	0
14	Haijima-bashi	M	A	Muscle	1.3	<0.10	<0.10	0.39	3.7	9.0	12	1.7	0.10	<0.10	<0.10	26	<5	<5	<5	<5	<5	0
15	Haijima-bashi	M	A	Muscle	1.1	<0.10	<0.10	0.30	1.7	4.3	6.3	1.4	0.13	<0.10	<0.10	14	<5	<5	<5	<5	<5	0
16	Haijima-bashi	M	A	Muscle	1.4	<0.10	<0.10	<0.10	1.7	4.8	4.8	0.54	<0.10	<0.10	<0.10	12	<5	<5	<5	<5	<5	0
17	Tamagawara-bashi	M	A	Muscle	1.7	<0.10	<0.10	0.21	3.2	3.0	3.1	0.53	<0.10	<0.10	<0.10	10	<5	<5	<5	<5	<5	0
18	Tamagawara-bashi	M	A	Muscle	2.1	<0.10	<0.10	3.6	6.4	9.7	20	4.8	0.61	<0.10	<0.10	45	<5	<5	<5	<5	<5	0
19	Tamagawara-bashi	M	A	Muscle	0.90	<0.10	<0.10	<0.10	2.5	2.7	3.3	0.48	<0.10	<0.10	<0.10	8.9	<5	<5	<5	<5	<5	0
20	Tamagawara-bashi	M	A	Muscle	1.0	<0.10	<0.10	0.29	2.3	2.1	2.5	0.60	<0.10	<0.10	<0.10	7.8	<5	<5	<5	<5	<5	0
21	Denenchofu-seki	M	A	Muscle	3.2	<0.10	0.46	7.7	21	30	28	4.1	0.42	<0.10	<0.10	91	<5	<5	<5	<5	<5	0
22	Denenchofu-seki	M	A	Muscle	3.0	<0.10	0.44	23	110	300	220	29	1.9	<0.10	<0.10	690	<5	<5	<5	<5	<5	0
23	Denenchofu-seki	M	A	Muscle	3.4	<0.10	<0.10	27	88	130	76	2.9	0.57	<0.10	<0.10	330	<5	<5	<5	<5	<5	0
24	Denenchofu-seki	M	A	Muscle	1.6	<0.10	4.3	10	72	150	99	12	0.65	<0.10	<0.10	350	<5	<5	<5	<5	<5	0
25	Denenchofu-seki	M	A	Muscle	3.0	<0.10	<0.10	7.8	34	87	60	9.3	0.83	<0.10	<0.10	200	<5	<5	<5	<5	<5	0
26	Denenchofu-seki	M	A	Muscle	3.3	<0.10	<0.10	22	86	180	120	14	0.83	<0.10	<0.10	420	<5	<5	<5	<5	<5	0
27	Denenchofu-seki	M	A	Muscle	1.5	<0.10	<0.10	12	70	110	90	15	0.39	<0.10	<0.10	290	<5	<5	<5	<5	<5	0

* Calculated on the assumption that values below the limit of detection are counted as 0.