Mercury In Fish Tissue Report Sheet

Mercury (Hg) is a naturally occurring element. It enters the atmosphere by burning fossil fuels, trash, and medical waste. Once deposited on the landscape, some portion is biologically transformed into a highly toxic form known as methyl-mercury. Methyl-mercury occurs in low concentrations in surface waters; however, it moves up the food chain and can result in high concentrations in fish consumed by humans and wildlife. In New Hampshire, a statewide fish consumption advisory has been in place since 1994, with revisions in 2001 and 2008. The advisory places recommended limits on the number of meals per month that should be consumed and includes statewide guidance for pregnant and nursing women, children, and adults as well as species- and waterbody-specific restrictions. The consumption limits are based on a total mercury tissue benchmark concentration of 0.70 mg/kg. Essentially, this assumes that the total mercury concentration of one serving of fish for each meal consumed is 0.70 mg/kg and can be used to compare to tissue concentrations in the data tables below for the waterbody of interest. To read the full advisory, click here. For a full report on mercury in fish tissue in New Hampshire, click here. For additional questions about the state fish consumption advisory, contact the Environmental Health Program at (603) 271-6865 or email Patricia.North@des.nh.gov.

The Department of Environmental Services (DES) has analyzed fish tissue for mercury concentration since 1992. Fish are collected by DES, NH Fish and Game, or interested citizens. This is a free public service, and interested citizens can learn how to participate by clicking here. For additional questions about species to collect or about the program in general, contact Walter Henderson at (603) 271-8802 or Walter.Henderson@des.nh.gov.

Summary of statewide fish species tissue mercury concentrations (mg Hg/ kg tissue). For more information, click here.

Fish species	Length-based consumption restriction in place (Y/N)	All lengths			8 - 12 inch length			>12 inch length		
		Average	*Upper 95% confidence interval*	*Number of fish*	*Average*	*Upper 95% confidence interval*	*Number of fish*	*Average*	*Upper 95% confidence interval*	*Number of fish*
Alewife	N	0.20	n/a	3						
Atlantic salmon	N	0.23	0.27	28						
Black crappie	N	0.44	0.50	59						
Bluegill	N	0.29	0.34	29						
Brook trout	N	0.07	0.10	91						
Brown bullhead	N	0.15	0.18	152						
Brown trout	N	0.11	n/a	8						
Cusk	N	0.31	0.35	29						
Eastern chain pickerel	**Y**	0.64	0.70	253	0.33	0.39	39	0.71	0.77	211
Fallfish	N	0.36	0.43	27						
Golden shiner	N	0.15	n/a	1						
Lake trout	N	0.44	0.63	40				0.49	0.68	37
Lake whitefish	N	0.10	n/a	1						
Largemouth bass	**Y**	0.56	0.59	632	0.39	0.42	245	0.70	0.74	366
Northern pike	N	0.60	n/a	2				0.60	n/a	2
Pumpkinseed	N	0.27	0.32	57						
Rainbow trout	N	0.08	0.09	300						
Rock bass	N	0.34	0.41	21						
Smallmouth bass	**Y**	0.67	0.71	411	0.43	0.47	186	0.90	0.96	211
Smelt	N	0.17	n/a	1						
Sunfish (lepomis sp)	N	0.19	0.26	13						
Walleye	N	0.66	0.86	11				0.66	0.86	11
White perch	**Y**	0.49	0.53	210	0.45	0.49	151	0.67	0.73	44
White sucker	N	0.23	0.28	52						
Yellow bullhead	N	0.43	0.73	10						
Yellow perch	**Y**	0.35	0.36	1,659	0.41	0.42	814	0.91	1.10	60
Total		0.33		4,100						
Benchmark Concentration for Consumptive Limits		0.70				0.70			0.70	

Shaded rows indicates species recommended for a size-restricted consumptive limit

Waterbody Name:	Mascoma Lake
Town:	Enfield
Waterbody ID:	NHLAK801060105-04-01

Brown Bullhead

(*Ictalurus nebulosus*)

Year Collected	Length (cm)	Weight (g)	Hg (mg Hg/ kg tissue)
2010	23	161	0.1015
2010	29	278	0.1104

Eastern Chain Pickerel

(*Esox niger*)

Year Collected	Length (cm)	Weight (g)	Hg (mg Hg/ kg tissue)
2001	44.5	522	0.561
2001	46.5	634	0.606
2009	44.5	526	0.7035
2009	47	619	1.1023
2009	53	923	1.5263
2010	43	309	0.4325
2011	43	429	0.5586
2011	40	348	0.5661
2014	56.7	1855.2	0.3336
2015	48.5	633	0.7498
2016	45.75		1.3986

Largemouth Bass

(*Micropterus salmoides*)

Year Collected	Length (cm)	Weight (g)	Hg (mg Hg/ kg tissue)
2015	27	288	0.3792
2016	40	876	0.7507

Note: Raw Hg values are presented and have not been adjusted based on fish size.

Rainbow Trout

(*Oncorhynchus mykiss*)

Year Collected	Length (cm)	Weight (g)	Hg (mg Hg/ kg tissue)
1995	44.1	352	0.025
1995	27.3	297	0.022
1995	26.3	294	0.023

Rock Bass

(*Ambloplites rupestris*)

Year Collected	Length (cm)	Weight (g)	Hg (mg Hg/ kg tissue)
2013	21.5	191	0.681

Smallmouth Bass

(*Micropterus dolomieu*)

Year Collected	Length (cm)	Weight (g)	Hg (mg Hg/ kg tissue)
1995	32.2	289	0.46
1995	38.2	311	0.778
2014	29.5	336	0.5574

White Perch

(*Morone americana*)

Year Collected	Length (cm)	Weight (g)	Hg (mg Hg/ kg tissue)
2000	22	152	0.74
2000	21	126	0.509
2000	22	158	0.785
2000	21.5	128	0.73
2006	20	126	0.668
2006	21	129	1.003
2006	20	118	0.707
2006	21	134	0.606
2006	20.5	130	0.641
2006	21	130	0.774
2006	21	123	0.735
2006	22	142	1.04
2006	21	127	0.761

Note: Raw Hg values are presented and have not been adjusted based on fish size.

2006	20	134	0.712
2009	22	144	0.8084
2009	20.5	133	0.8359
2009	21.5	146	0.8793
2009	23.5	204	0.7871
2009	21.5	162	0.8987
2009	22	167	0.6213
2009	29	374	1.0231
2010	23	179	0.7757
2010	22.5	162	0.8627
2010	24.5	214	0.8195
2010	23	168	0.5758
2010	24.5	231	0.8607
2011	23.5	204	0.7159
2011	23	179	1.0076
2011	25.5	225	1.0765
2013	23.5	155	0.446
2013	24	155	0.4066
2013	22	134	0.3809
2014	24.5	175	0.5541
2014	24.5	170	0.5871
2014	23.5	164	1.2322
2014	24.5	191	0.6742
2015	24	189	0.5621
2015	24.5	211	0.5413
2015	25	207	0.536
2017	24.5	220	0.3223
2017	25	235	0.3848
2017	24	217	0.2187
2017	25.5	232	0.2957
2017	30	401	0.6442

Yellow Perch

(*Perca flavescens*)

Year Collected	Length (cm)	Weight (g)	Hg (mg Hg/ kg tissue)
2014	35.6	684.9	0.3651
2016	20	120	0.2726
2016	21	140	0.2247
2016	21.5	126	0.2076
2016	25	218	0.7419

Note: Raw Hg values are presented and have not been adjusted based on fish size.

2016	24.5	213	0.7068

Interested in submitting fish for mercury testing? Click here to learn more.

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