TABLE 9
RECOMMENDED AND ADOPTED HUMAN BODY WEIGHT VALUES *

Chemical	EPA Recommended Body Weight (kg)	FDEP Adopted Body Weight (kg)
1,1,1-Trichloroethane 71556	80	
1,1,2,2-Tetrachloroethane 79345	80	70
1,1,2-Trichloroethane 79005	80	
1,1-Dichloroethylene 75354	80	70
1,2,4-Trichlorobenzene 120821	80	
1,2-Dichlorobenzene 95501	80	
1,2-Dichloroethane 107062	80	
1,2-Dichloropropane 78875	80	
1,2-Diphenylhydrazine 122667	80	
1,3-Dichlorobenzene 541731	80	
1,3-Dichloropropene 542756	80	
1,4-Dichlorobenzene 106467	80	
2,3,7,8-TCDD (Dioxin) 1746016	70	
2,4,6-Trichlorophenol 88062	80	70

Chemical	EPA Recommended Body Weight (kg)	FDEP Adopted Body Weight (kg)
2,4-Dichlorophenol 120832	80	70
2,4-Dimethylphenol 105679	80	
2,4-Dinitrophenol 51285	80	70
2,4-Dinitrotoluene 121142	80	70
2-Chloronaphthalene 91587	80	
2-Chlorophenol 95578	80	70
2-Methyl-4,6-Dinitrophenol 534521	80	
3,3'-Dichlorobenzidine 91941	80	
3-Methyl-4-Chlorophenol 59507	80	
Acenaphthene 83329	80	70
Acrolein 107028	80	
Acrylonitrile 107131	80	
Aldrin 309002	80	70
alpha-Hexachlorocyclohexane (HCH) 319846	80	
alpha-Endosulfan 959988	80	

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Chemical	EPA Recommended Body Weight (kg)	FDEP Adopted Body Weight (kg)
Anthracene 120127	80	70
Antimony 7440360	70	70
Arsenic 7440382	70	
Asbestos 1332214	70	
Benzene 71432	80	70
Benzidine 92875	80	
Benzo(a)anthracene 56553	80	
Benzo(a)pyrene 50328	80	
Benzo(b)fluoranthene 205992	80	
Benzo(k)fluoranthene 207089	80	
beta-Hexachlorocyclohexane (HCH) 319857	80	70
beta-Endosulfan 33213659	80	
Bis(2-Chloro-1-Methylethyl) Ether 108601	80	
Bis(2-Chloroethyl) Ether 111444	80	
Bis(2-Ethylhexyl) Phthalate 117817	80	

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Chemical	EPA Recommended Body Weight (kg)	FDEP Adopted Body Weight (kg)
Bromoform 75252	80	70
Butylbenzyl Phthalate 85687	80	
Carbon Tetrachloride 56235	80	70
Chlordane 57749	80	
Chlorobenzene 108907	80	
Chlorodibromomethane 124481	80	70
Chloroform 67663	80	70
Chrysene 218019	80	
Copper 7440508	70	
Cyanide 57125	80	
Dibenzo(a,h)anthracene 53703	80	
Dichlorobromomethane 75274	80	70
Dieldrin 60571	80	70
Diethyl Phthalate 84742	80	
Dimethyl Phthalate 131113	80	

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Chemical	EPA Recommended Body Weight (kg)	FDEP Adopted Body Weight (kg)
Di-n-Butyl Phthalate 84742	80	
Endosulfan Sulfate 1031078	80	
Endrin 72208	80	
Endrin Aldehyde 7421934	80	
Ethylbenzene 100414	80	
Fluoranthene 206440	80	70
Fluorene 86737	80	70
gamma-Hexachlorocyclohexane (HCH) [Lindane] 58899	80	70
Heptachlor 76448	80	70
Heptahlor Epoxide 1024573	80	
Hexachloroenzene 118741	80	
Hexachlorobutadiene 87683	80	70
Hexachlorocyclopentadiene 77474	80	
Hexachloroethane 67721	80	
Indeno(1,2,3-cd)pyrene 193395	80	

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Chemical	EPA Recommended Body Weight (kg)	FDEP Adopted Body Weight (kg)
Isophorone 78591	80	
Methylmercury 22967926		
Methyl Bromide 74839	80	
Methylene Chloride 75092	80	70
Nickel 744000	70	
Nitrobenzene 98953	80	
N-Nitrosodimethylamine 62759	70	
N-Nitrosodiphenylamine 86306	70	
N-Nitrosodi-n-Propylamine 621647	70	
Pentachlorophenol 87865	80	70
Phenol 108952	80	
p,p'-Dichlorodiphenyldichloroethane (DDD) 72548	80	
p,p -Dichlorodiphenyldichloroethylene (DDE) 72559	80	
p,p'-Dichlorodiphenyltrichloroethane (DDT) 50293	80	70
Polychlorinated Biphenyls (PCBs) 1336363	70	70

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Chemical	EPA Recommended Body Weight (kg)	FDEP Adopted Body Weight (kg)
Pyrene 129000	80	70
Selenium 7782492	70	
Tetrachloroethylene 127184	80	70
Thallium 7440280	70	70
Toluene 108883	80	
Toxaphene 8001352	80	
trans-1,2-Dichloroethylene 156605	80	
Trichloroethylene 79016	80	70
Vinyl Chloride 75014	80	
Zinc 7440666	70	

*** Summary:**

Table 9 identifies the human body weight used to calculate EPA's national recommended water quality criteria for 98 toxic pollutants to protect human health and the human body weight used to calculate FDEP's adopted water quality criteria for 32 toxic pollutants to protect human health. The former are based on individual water quality criteria documents for toxic pollutants hyperlinked in *National Recommended Water Quality Criteria - Human Health Criteria Table*, https://www.epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table (accessed Dec. 31, 2021). The latter are based on electronic mail from Kaitlyn Sutton, Environmental Administrator, Water Quality Standards Development Section, Division of Environmental Assessment and Restoration, FDEP, to David A. Ludder, Law Office of David A. Ludder, PLLC (dated Aug. 30, 2021) and Fla. Admin. Code r. 62-302.530,

Table: Surface Water Quality Criteria (indicating that no criteria have been adopted for 3,3'-Dichlorobenzidine, Acrylonitrile, and gamma-Hexachlorocyclohexane (HCH) [Lindane], among others).

Comments:

In November 1980, EPA recommended a national default human body weight of 70 kg based on the *Report of the Task Group on Reference Man, International Commission for Radiation Protection* (Nov. 23, 1957). *Notice of Water Quality Criteria Documents*, 45 Fed. Reg. 79318, 79324 (Nov. 28, 1980). This body weight was reaffirmed in 2000. *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health* (EPA-822-B-00-004, Oct. 2000), at 4-19.

In September, 2011, EPA updated the national default human body weight to 80 kg based on data derived from the National Health and Nutrition Examination Survey (NHANES) 1999-2006. *Exposure Factors Handbook: 2011 Edition* (EPA-600-R-09-052F, Sep 2011), at Table 8-1.

In *Water Quality Standards Handbook* (EPA 823-B-17-001 2017), Chap. 3, at § 3.3.2, EPA explained:

> The EPA's 2015 updated recommended exposure assumption for body weight is 80 kg, which represents the mean weight for adults 21 years of age and older based on data derived from the Center for Disease Control and Prevention's National Health and Nutrition Examination Survey (NHANES) 1999–2006 data. This recommendation is found in Table 8.1 in the 2011 Exposure Factors Handbook. This updated body weight assumption replaced the EPA's previously recommended weight for adults of 70 kg that was described in the 2000 Human Health Methodology, which was approximated from the mean body weight of adults from the NHANES III database (1988-1994) and a 1989 study by the National Cancer Institute (see the 2000 Human Health Methodology for additional information).

See Human Health Ambient Water Quality Criteria: 2015 Update (EPA 820-F-15-001 June 2015).

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