

The Risk Assessment Information System Compendium of Ecological Screening Benchmarks for Chemicals and Radionuclides (2025) (Volume VI – Chemical for Sediment: Fresh Water)



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**THE RISK ASSESSMENT INFORMATION SYSTEM COMPENDIUM OF
ECOLOGICAL SCREENING BENCHMARKS FOR CHEMICALS AND
RADIONUCLIDES (2025) (VOLUME VI – CHEMICALS FOR SEDIMENT: FRESH
WATER)**

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November 2025

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1. INTRODUCTION

Volume VI presents the chemical benchmarks for sediment: fresh water. Consult Volume I for information on the sources.

2. CHEMICAL BENCHMARKS FOR SEDIMENT (FRESH WATER)

Table 1: Benchmark Values for Acenaphthene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
83-32-9	Canada	Sediment Freshwater ISQG	Not specified	0.00671	
83-32-9	Canada	Sediment Freshwater PEL	Not specified	0.08890	
83-32-9	EPA OSWER	Freshwater SQC	Not specified	0.62000	
83-32-9	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.00670	
83-32-9	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.00670	28
83-32-9	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	4.91000	
83-32-9	EPA Region 6	Sediment Freshwater	Not specified	0.00671	
83-32-9	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.05000	
83-32-9	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.08890	

Benchmark Values for Acenaphthene in Sediment (Fresh Water)

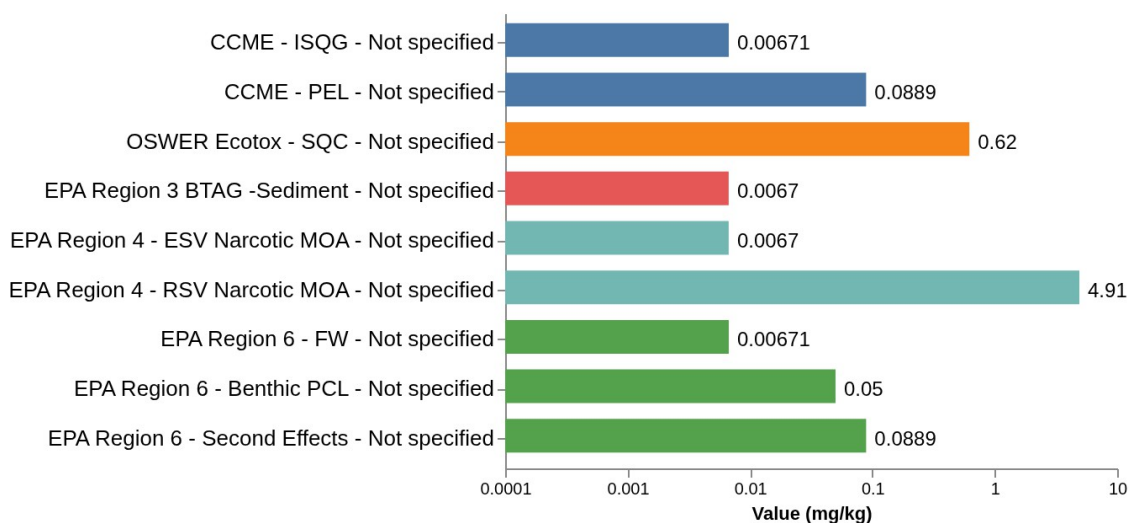


Table 2: Benchmark Values for Acenaphthylene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
208-96-8	Canada	Sediment Freshwater ISQG	Not specified	0.00587	
208-96-8	Canada	Sediment Freshwater PEL	Not specified	0.12800	
208-96-8	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.00590	
208-96-8	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.00590	28
208-96-8	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	4.52000	
208-96-8	EPA Region 6	Sediment Freshwater	Not specified	0.00587	
208-96-8	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.07000	
208-96-8	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.12800	

Benchmark Values for Acenaphthylene in Sediment (Fresh Water)

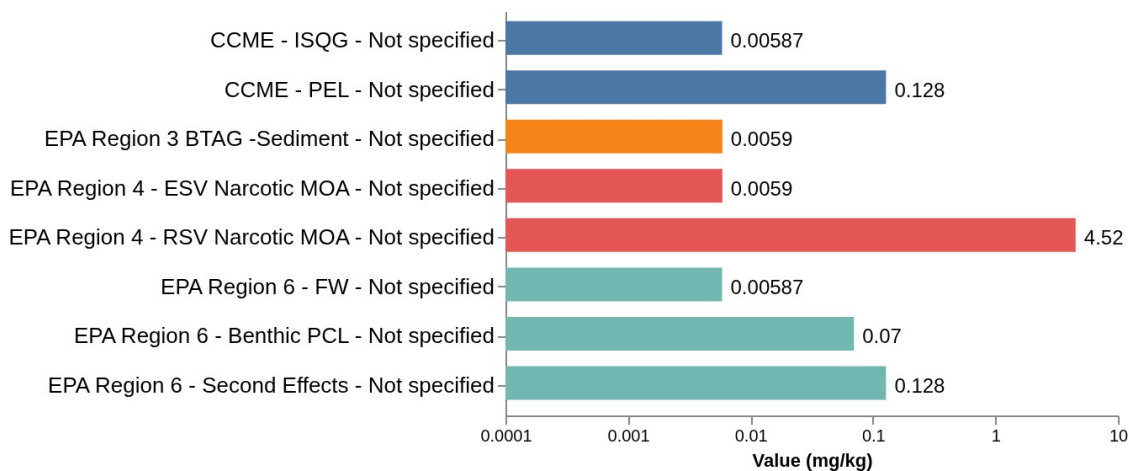


Table 3: Benchmark Values for Acephate in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
30560-19-1	EPA Region 4	Sediment ESV	Not specified	0.05

Benchmark Values for Acephate in Sediment (Fresh Water)

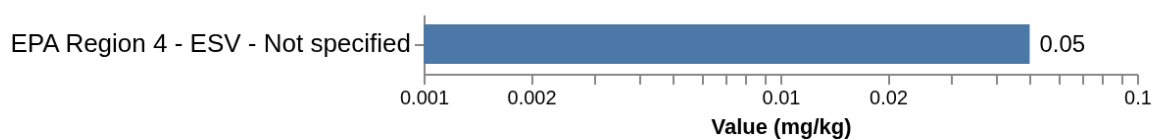


Table 4: Benchmark Values for Acetaldehyde in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
75-07-0	EPA Region 4	Sediment ESV	Not specified	0.040
75-07-0	EPA Region 4	Freshwater Refinement Screening Value	Not specified	1.291

Benchmark Values for Acetaldehyde in Sediment (Fresh Water)

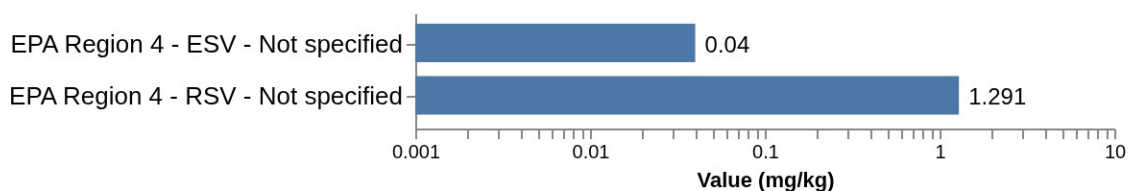


Table 5: Benchmark Values for Acetic acid, 2-(4-Chloro-2-methylphenoxy) (MCPA) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
94-74-6	EPA Region 4	Sediment ESV	Not specified	0.0016

Benchmark Values for Acetic acid, 2-(4-Chloro-2-methylphenoxy) (MCPA) in Sediment (Fresh Water)

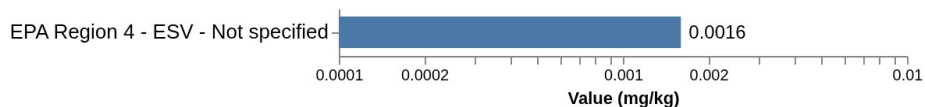


Table 6: Benchmark Values for Acetone in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
67-64-1	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.065	28
67-64-1	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	38.133	
67-64-1	EPA Region 6	Sediment Freshwater	Not specified	60.030	
67-64-1	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	210.110	
67-64-1	EPA Region 6	Sediment Freshwater Second Effects	Not specified	360.180	

Benchmark Values for Acetone in Sediment (Fresh Water)

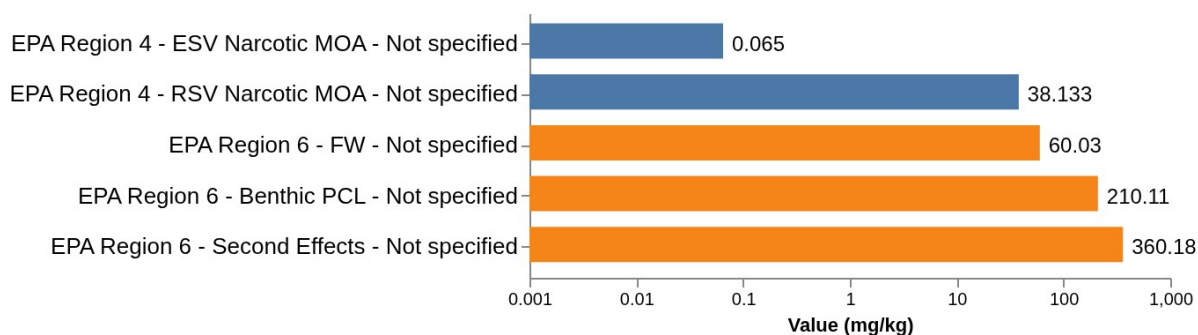


Table 7: Benchmark Values for Acetonitrile in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
75-05-8	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	4.167
75-05-8	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	25.498

Benchmark Values for Acetonitrile in Sediment (Fresh Water)

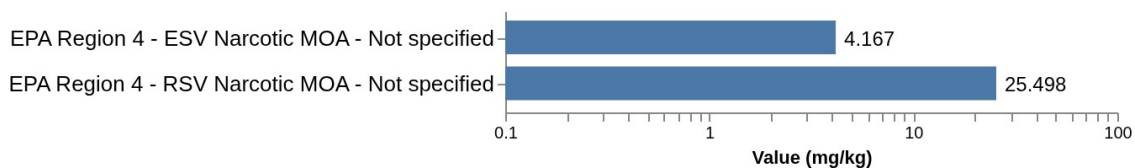


Table 8: Benchmark Values for Acrolein in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
107-02-8	EPA Region 4	Sediment ESV	Not specified	0.00093
107-02-8	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.00340

Benchmark Values for Acrolein in Sediment (Fresh Water)

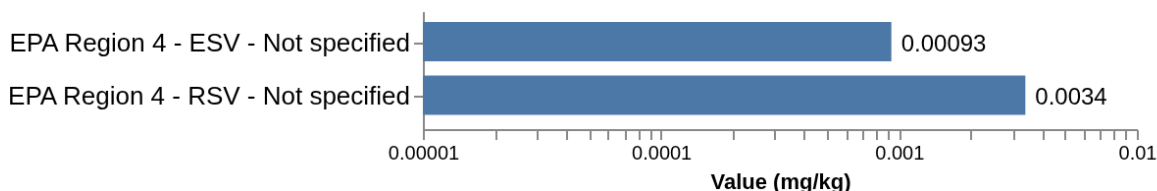


Table 9: Benchmark Values for Acrylonitrile in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
107-13-1	EPA Region 4	Sediment ESV	Not specified	0.030
107-13-1	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.151
107-13-1	EPA Region 6	Sediment Freshwater	Not specified	0.550
107-13-1	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	1.100
107-13-1	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1.650

Benchmark Values for Acrylonitrile in Sediment (Fresh Water)

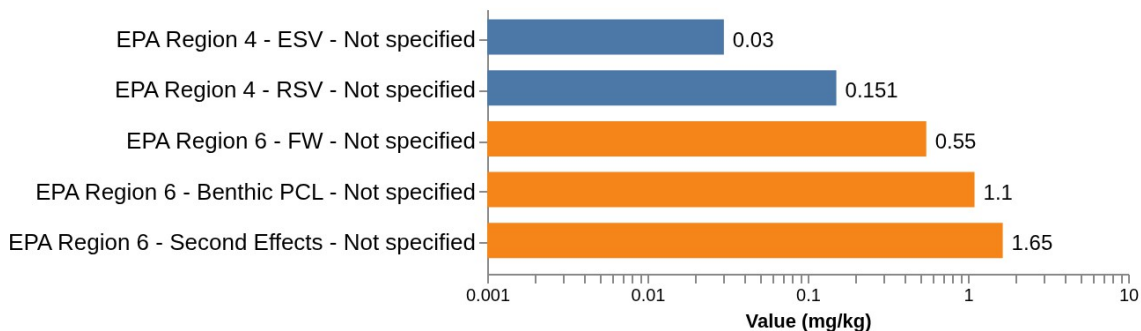


Table 10: Benchmark Values for Aldrin in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
309-00-2	British Columbia	Freshwater Sediment LTC – No Effect	Not specified	0.0021	
309-00-2	British Columbia	Freshwater Sediment LTC – Probable Effect	Not specified	0.0810	
309-00-2	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0020	
309-00-2	EPA Region 4	Sediment ESV	Aquatic only	0.0290	7
309-00-2	EPA Region 4	Sediment ESV	Wildlife only	0.0420	7, 28
309-00-2	EPA Region 4	Freshwater Refinement Screening Value	Aquatic only	0.0800	7
309-00-2	EPA Region 4	Freshwater Refinement Screening Value	Wildlife only	0.2100	7, 28
309-00-2	EPA Region 6	Sediment Freshwater	Not specified	0.0020	
309-00-2	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.0400	
309-00-2	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.0800	

Benchmark Values for Aldrin in Sediment (Fresh Water)

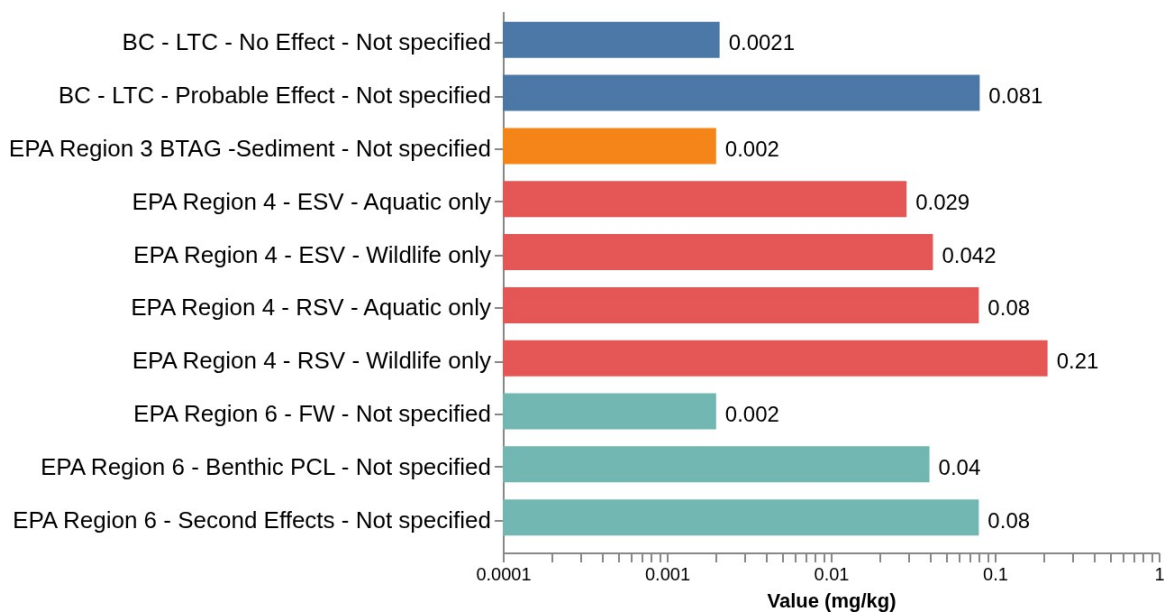


Table 11: Benchmark Values for Aluminum in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
7429-90-5	EPA Region 4	Sediment ESV	Not specified	25000.0
7429-90-5	EPA Region 4	Freshwater Refinement Screening Value	Not specified	58000.0

Benchmark Values for Aluminum in Sediment (Fresh Water)

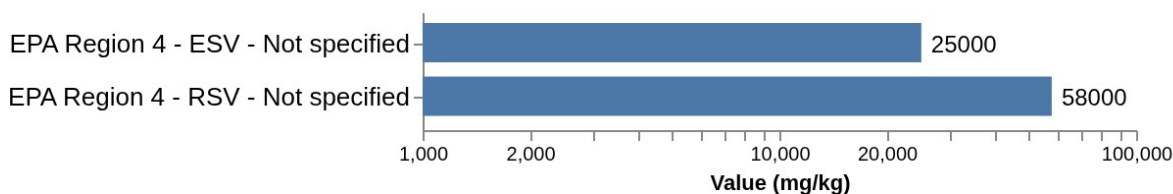


Table 12: Benchmark Values for Ammonia in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
7664-41-7	EPA Region 4	Sediment ESV	Not specified	230.0
7664-41-7	EPA Region 4	Freshwater Refinement Screening Value	Not specified	300.0
7664-41-7	Washington	Freshwater Sediment Cleanup Objective	Not specified	230.0
7664-41-7	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	300.0

Benchmark Values for Ammonia in Sediment (Fresh Water)

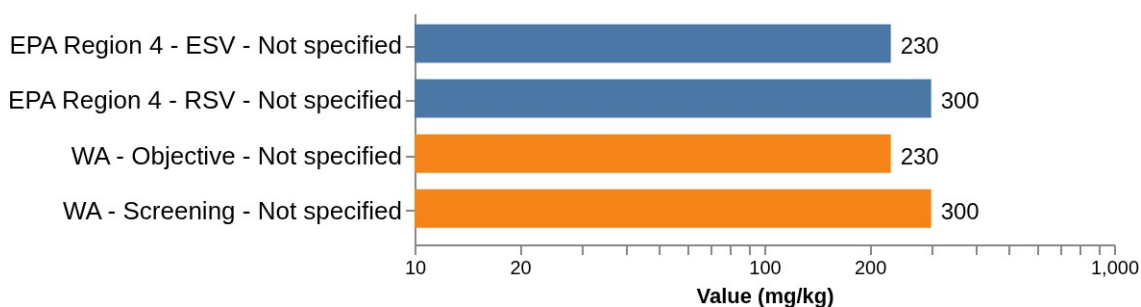


Table 13: Benchmark Values for Aniline in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
62-53-3	EPA Region 4	Sediment ESV	Not specified	0.0023
62-53-3	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.0120

Benchmark Values for Aniline in Sediment (Fresh Water)

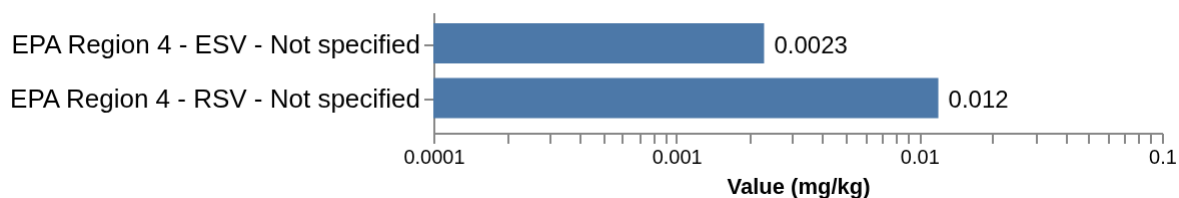


Table 14: Benchmark Values for Anthracene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
120-12-7	Canada	Sediment Freshwater ISQG	Not specified	0.0469	
120-12-7	Canada	Sediment Freshwater PEL	Not specified	0.2450	
120-12-7	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0572	
120-12-7	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.0570	28
120-12-7	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	5.9400	
120-12-7	EPA Region 6	Sediment Freshwater	Not specified	0.0572	
120-12-7	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.4500	
120-12-7	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.8450	
120-12-7	Florida	Freshwater ERL	Not specified	0.0850	
120-12-7	Florida	Freshwater LEL	Not specified	0.2200	
120-12-7	Florida	Freshwater ERM	Not specified	0.9600	
120-12-7	Florida	Freshwater SEL	Not specified	3.7000	

Benchmark Values for Anthracene in Sediment (Fresh Water)

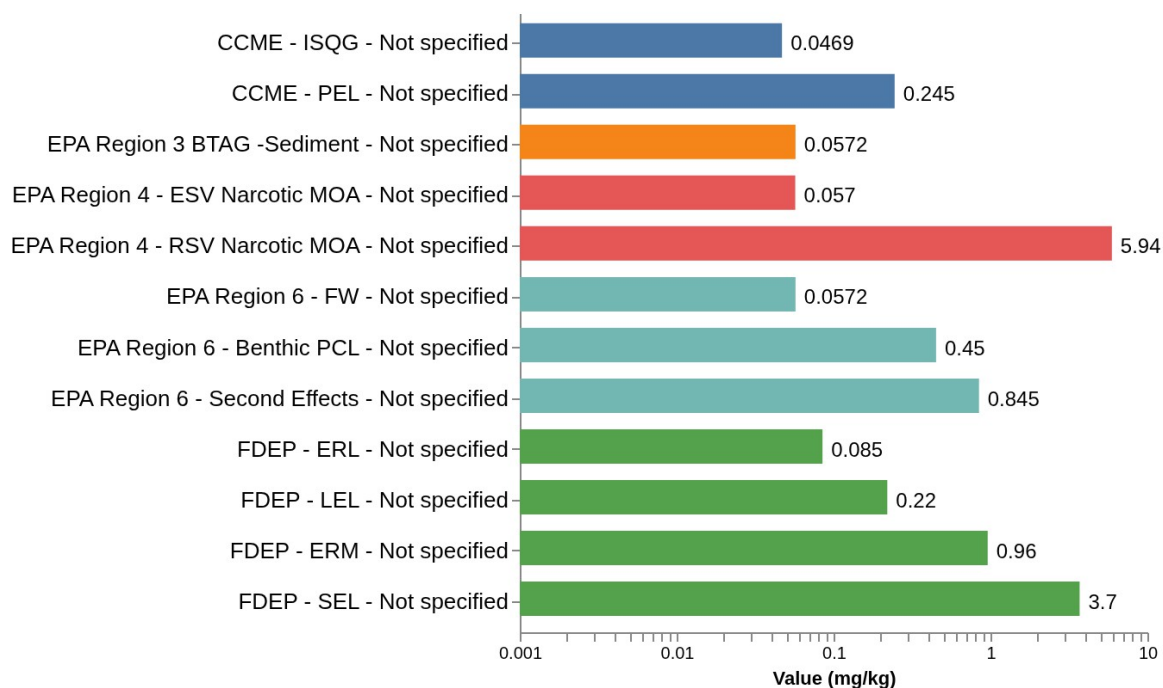


Table 15: Benchmark Values for Antimony (metallic) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
7440-36-0	EPA Region 3	BTAG – Freshwater Sediment	Not specified	2.00
7440-36-0	EPA Region 4	Sediment ESV	Not specified	2.00
7440-36-0	EPA Region 4	Freshwater Refinement Screening Value	Not specified	25.00
7440-36-0	EPA Region 6	Sediment Freshwater	Not specified	0.30
7440-36-0	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	6.15
7440-36-0	EPA Region 6	Sediment Freshwater Second Effects	Not specified	12.00

Benchmark Values for Antimony (metallic) in Sediment (Fresh Water)

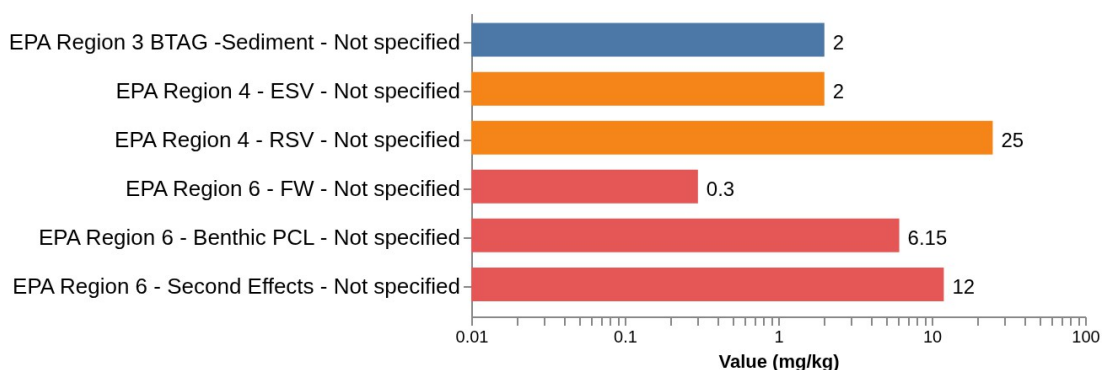


Table 16: Benchmark Values for Aroclor 1016 in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
12674-11-2	EPA Region 6	Sediment Freshwater	Not specified	0.007
12674-11-2	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.270
12674-11-2	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.530

Benchmark Values for Aroclor 1016 in Sediment (Fresh Water)

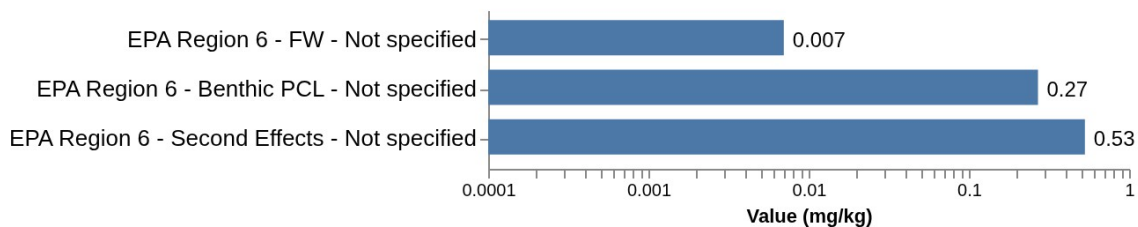


Table 17: Benchmark Values for Aroclor 1248 in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
12672-29-6	EPA Region 6	Sediment Freshwater	Not specified	0.03
12672-29-6	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.77
12672-29-6	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1.50

Benchmark Values for Aroclor 1248 in Sediment (Fresh Water)

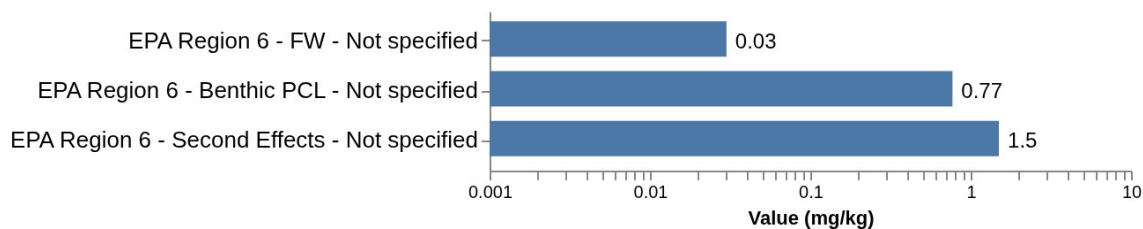


Table 18: Benchmark Values for Aroclor 1254 in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
11097-69-1	Canada	Sediment Freshwater ISQG	Not specified	0.06
11097-69-1	Canada	Sediment Freshwater PEL	Not specified	0.34
11097-69-1	EPA Region 6	Sediment Freshwater	Not specified	0.06
11097-69-1	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.20
11097-69-1	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.34

Benchmark Values for Aroclor 1254 in Sediment (Fresh Water)

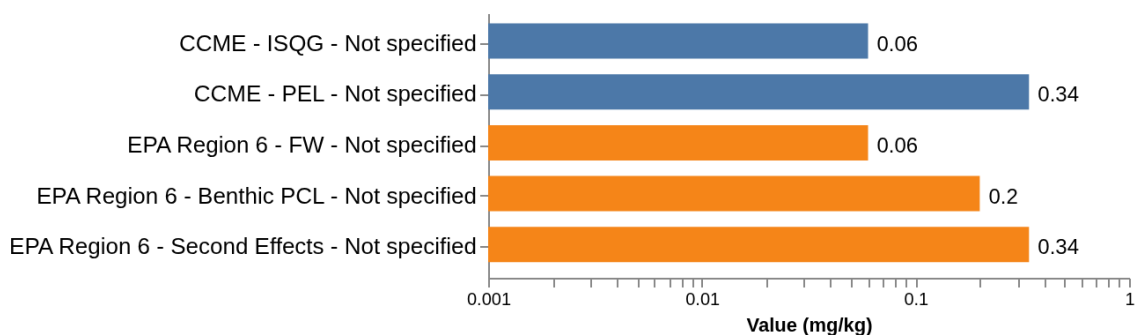


Table 19: Benchmark Values for Aroclor 1260 in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
11096-82-5	EPA Region 6	Sediment Freshwater	Not specified	0.005
11096-82-5	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.120
11096-82-5	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.240

Benchmark Values for Aroclor 1260 in Sediment (Fresh Water)

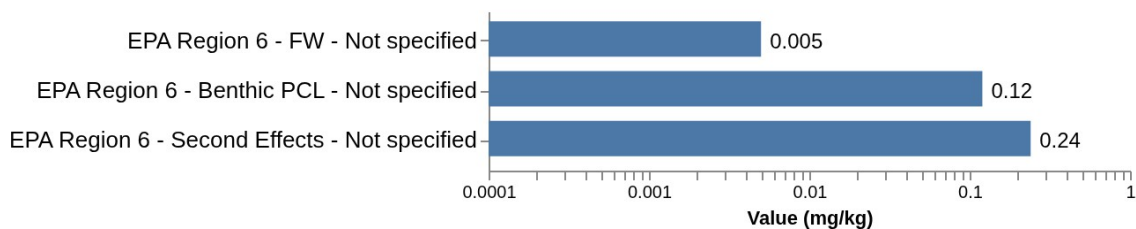


Table 20: Benchmark Values for Arsenic, Inorganic in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
7440-38-2	Canada	Sediment Freshwater ISQG	Not specified	5.900	
7440-38-2	Canada	Sediment Freshwater PEL	Not specified	17.000	
7440-38-2	EPA Region 3	BTAG – Freshwater Sediment	Not specified	9.800	
7440-38-2	EPA Region 4	Sediment ESV	Not specified	9.800	
7440-38-2	EPA Region 4	Freshwater Refinement Screening Value	Not specified	33.000	
7440-38-2	EPA Region 6	Sediment Freshwater	Not specified	9.790	
7440-38-2	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	21.395	
7440-38-2	EPA Region 6	Sediment Freshwater Second Effects	Not specified	33.000	
7440-38-2	Florida	Freshwater TEL	Not specified	5.900	
7440-38-2	Florida	Freshwater LEL	Not specified	6.000	
7440-38-2	Florida	Freshwater MET	Not specified	7.000	
7440-38-2	Florida	Freshwater PEL	Not specified	17.000	
7440-38-2	Florida	Freshwater TET	Not specified	17.000	
7440-38-2	Florida	Freshwater SEL	Not specified	33.000	
7440-38-2	Florida	Freshwater ERL	Not specified	33.000	
7440-38-2	Florida	Freshwater ERM	Not specified	85.000	
7440-38-2	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	10.000	
7440-38-2	New York DEC	Freshwater Sediment Class A	Not specified	10.000	23
7440-38-2	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	33.000	
7440-38-2	New York DEC	Freshwater Sediment Class C	Not specified	33.000	22
7440-38-2	Washington	Freshwater Sediment Cleanup Objective	Not specified	14.000	
7440-38-2	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	120.000	

Benchmark Values for Arsenic, Inorganic in Sediment (Fresh Water)

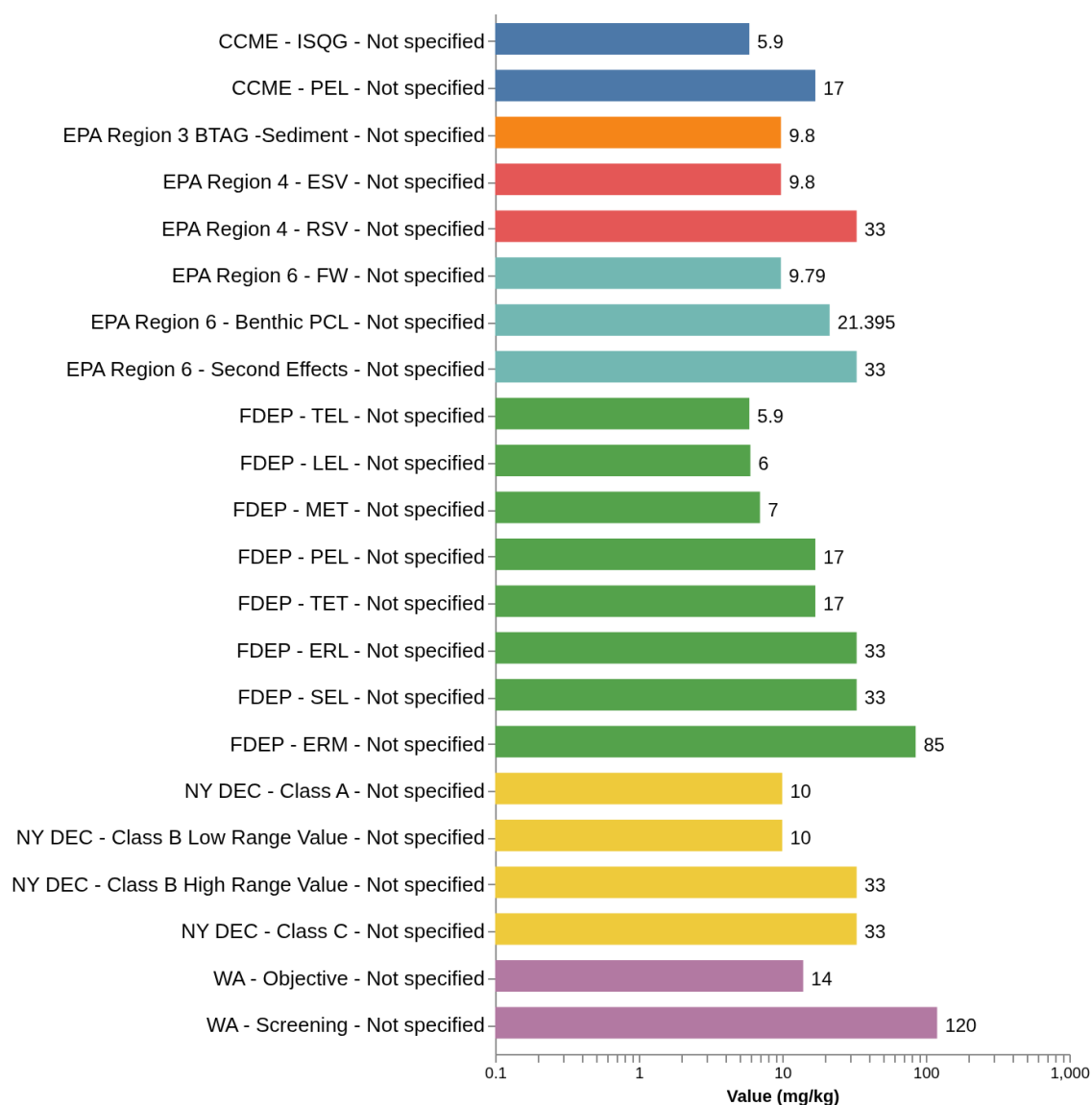


Table 21: Benchmark Values for Atrazine in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
1912-24-9	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.00662
1912-24-9	EPA Region 4	Sediment ESV	Not specified	0.00030
1912-24-9	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.08900

Benchmark Values for Atrazine in Sediment (Fresh Water)

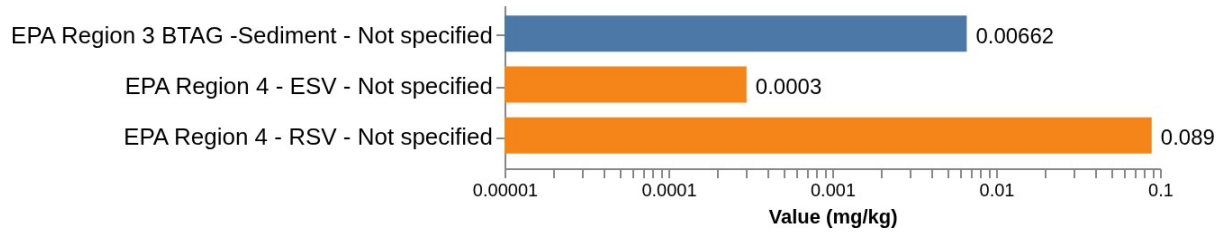


Table 22: Benchmark Values for Azinphos-methyl in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
86-50-0	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.000051	
86-50-0	EPA Region 4	Sediment ESV	Not specified	0.000060	28
86-50-0	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.000060	152
86-50-0	New York DEC	Freshwater Sediment Class A	Not specified	0.000060	23

Benchmark Values for Azinphos-methyl in Sediment (Fresh Water)

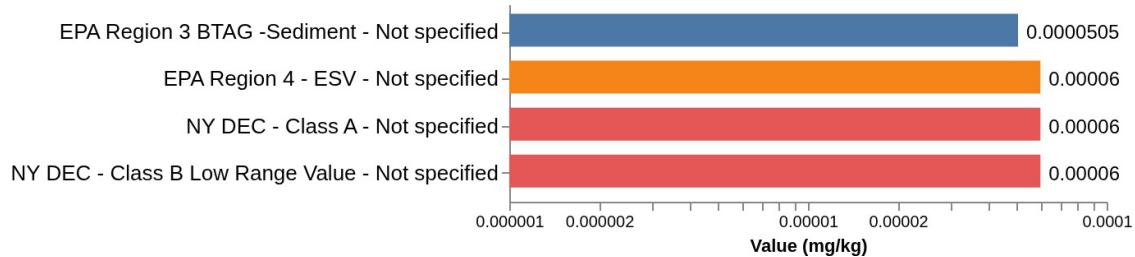


Table 23: Benchmark Values for Barium in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
7440-39-3	EPA Region 4	Sediment ESV	Not specified	20.0
7440-39-3	EPA Region 4	Freshwater Refinement Screening Value	Not specified	60.0

Benchmark Values for Barium in Sediment (Fresh Water)

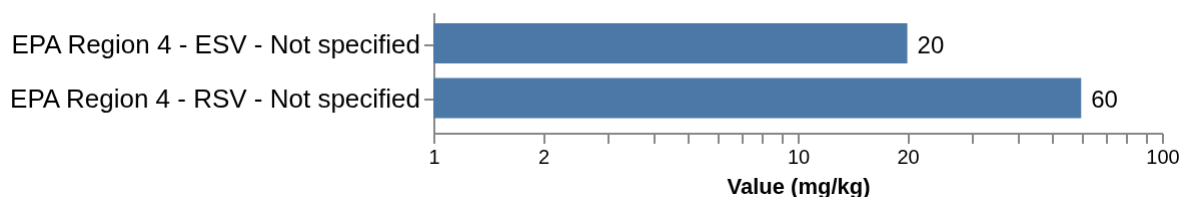


Table 24: Benchmark Values for Benfluralin in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
1861-40-1	New York DEC	Freshwater Sediment Class A	Not specified	1.9	23
1861-40-1	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	1.9	
1861-40-1	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	17.0	
1861-40-1	New York DEC	Freshwater Sediment Class C	Not specified	17.0	22

Benchmark Values for Benfluralin in Sediment (Fresh Water)

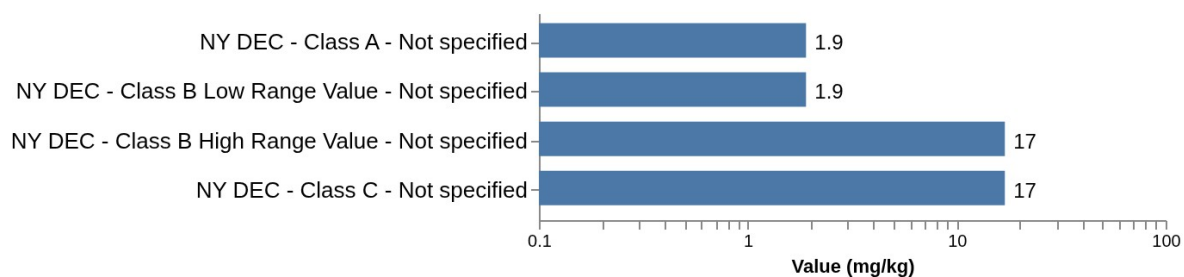


Table 25: Benchmark Values for Benz[a]anthracene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
56-55-3	Canada	Sediment Freshwater ISQG	Not specified	0.0317	
56-55-3	Canada	Sediment Freshwater PEL	Not specified	0.3850	
56-55-3	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.1080	
56-55-3	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.1080	7
56-55-3	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	8.4100	7
56-55-3	EPA Region 6	Sediment Freshwater	Not specified	0.1080	
56-55-3	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.5800	
56-55-3	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1.0500	
56-55-3	Florida	Freshwater TEL	Not specified	0.0317	
56-55-3	Florida	Freshwater ERL	Not specified	0.2300	
56-55-3	Florida	Freshwater LEL	Not specified	0.3200	
56-55-3	Florida	Freshwater PEL	Not specified	0.3850	
56-55-3	Florida	Freshwater MET	Not specified	0.4000	
56-55-3	Florida	Freshwater TET	Not specified	0.5000	
56-55-3	Florida	Freshwater ERM	Not specified	1.6000	
56-55-3	Florida	Freshwater SEL	Not specified	14.8000	

Benchmark Values for Benz[a]anthracene in Sediment (Fresh Water)

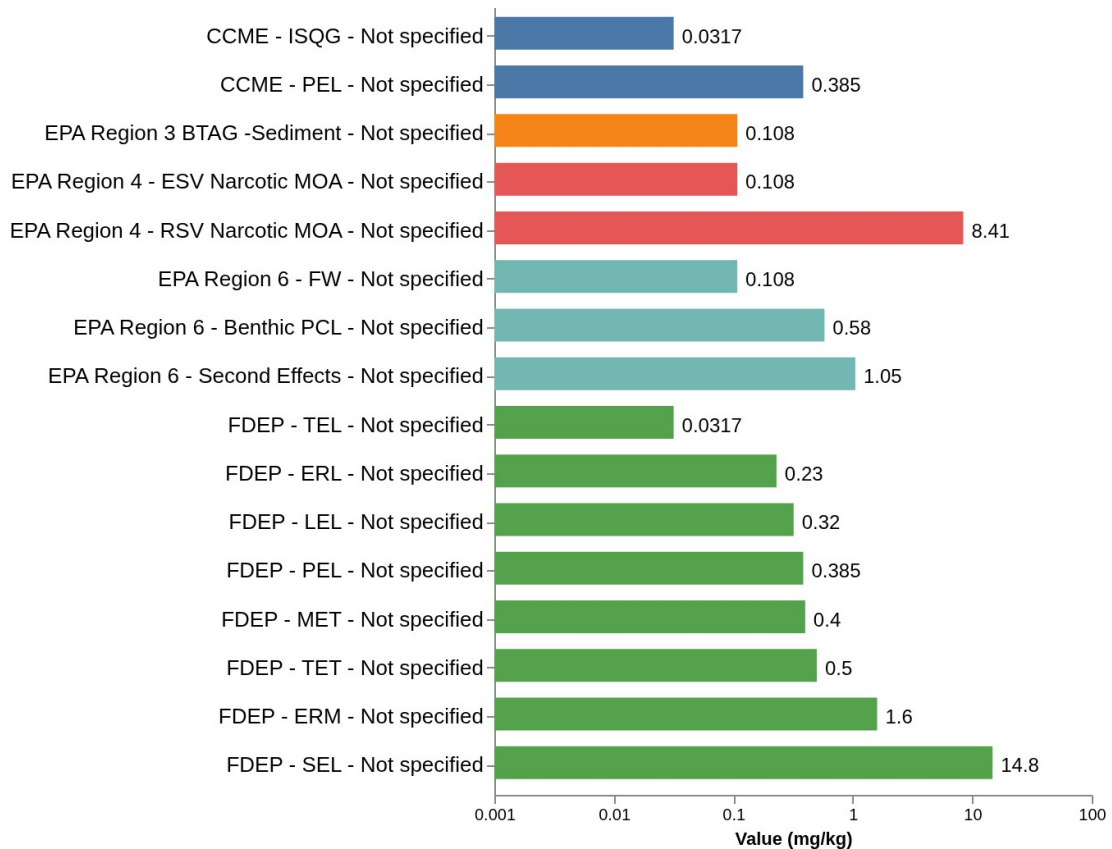


Table 26: Benchmark Values for Benzaldehyde in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
100-52-7	EPA Region 4	Sediment ESV	Not specified	0.059
100-52-7	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.580

Benchmark Values for Benzaldehyde in Sediment (Fresh Water)

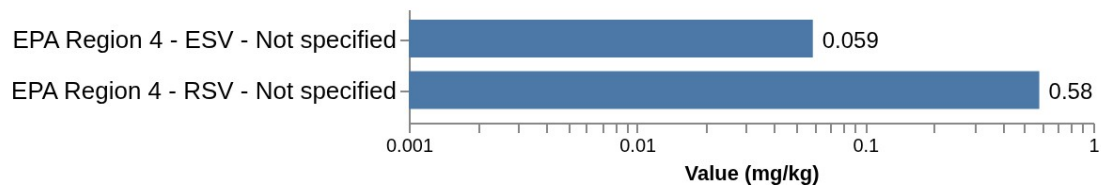


Table 27: Benchmark Values for Benzene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
71-43-2	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.010	28
71-43-2	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	2.185	
71-43-2	EPA Region 6	Sediment Freshwater	Not specified	0.160	
71-43-2	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	1.520	
71-43-2	EPA Region 6	Sediment Freshwater Second Effects	Not specified	2.870	
71-43-2	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.530	
71-43-2	New York DEC	Freshwater Sediment Class A	Not specified	0.530	23
71-43-2	New York DEC	Freshwater Sediment Class C	Not specified	1.900	22
71-43-2	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	1.900	

Benchmark Values for Benzene in Sediment (Fresh Water)

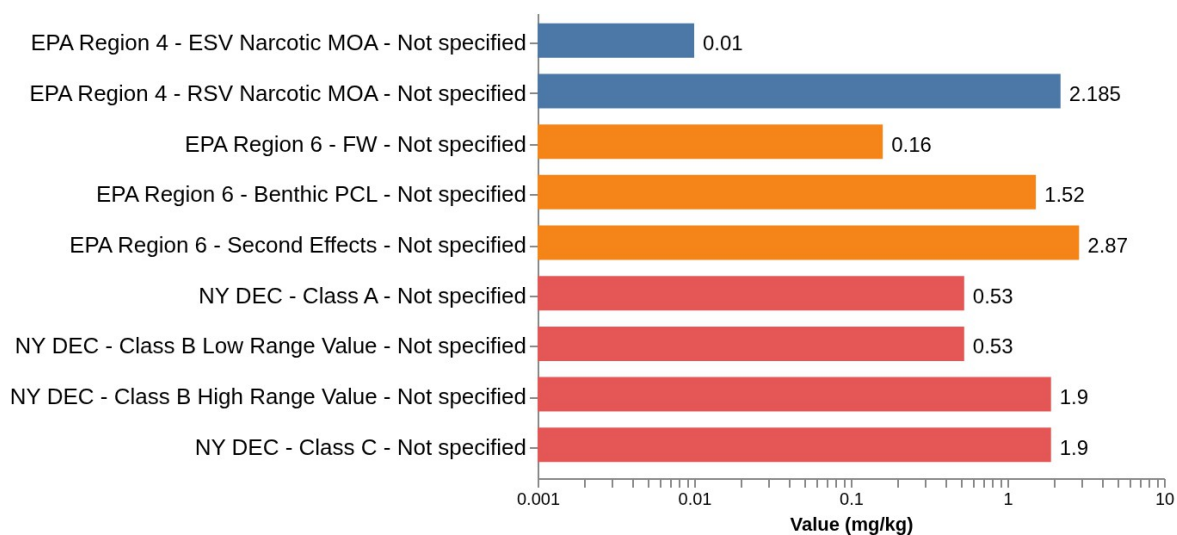


Table 28: Benchmark Values for Benzidine in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
92-87-5	EPA Region 4	Sediment ESV	Not specified	0.0011	
92-87-5	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.0170	

Benchmark Values for Benzidine in Sediment (Fresh Water)

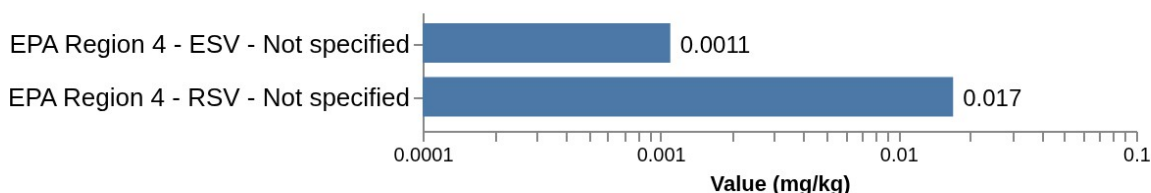


Table 29: Benchmark Values for Benzo[a]pyrene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
50-32-8	Canada	Sediment Freshwater ISQG	Not specified	0.0319	
50-32-8	Canada	Sediment Freshwater PEL	Not specified	0.7820	
50-32-8	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.1500	
50-32-8	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.1500	7, 28
50-32-8	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	9.6500	7
50-32-8	EPA Region 6	Sediment Freshwater	Not specified	0.1500	
50-32-8	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.8000	
50-32-8	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1.4500	
50-32-8	Florida	Freshwater TEL	Not specified	0.0319	
50-32-8	Florida	Freshwater LEL	Not specified	0.3700	
50-32-8	Florida	Freshwater MET	Not specified	0.4000	
50-32-8	Florida	Freshwater ERL	Not specified	0.4000	
50-32-8	Florida	Freshwater TET	Not specified	0.7000	
50-32-8	Florida	Freshwater PEL	Not specified	0.7820	
50-32-8	Florida	Freshwater ERM	Not specified	2.5000	
50-32-8	Florida	Freshwater SEL	Not specified	14.4000	

Benchmark Values for Benzo[a]pyrene in Sediment (Fresh Water)

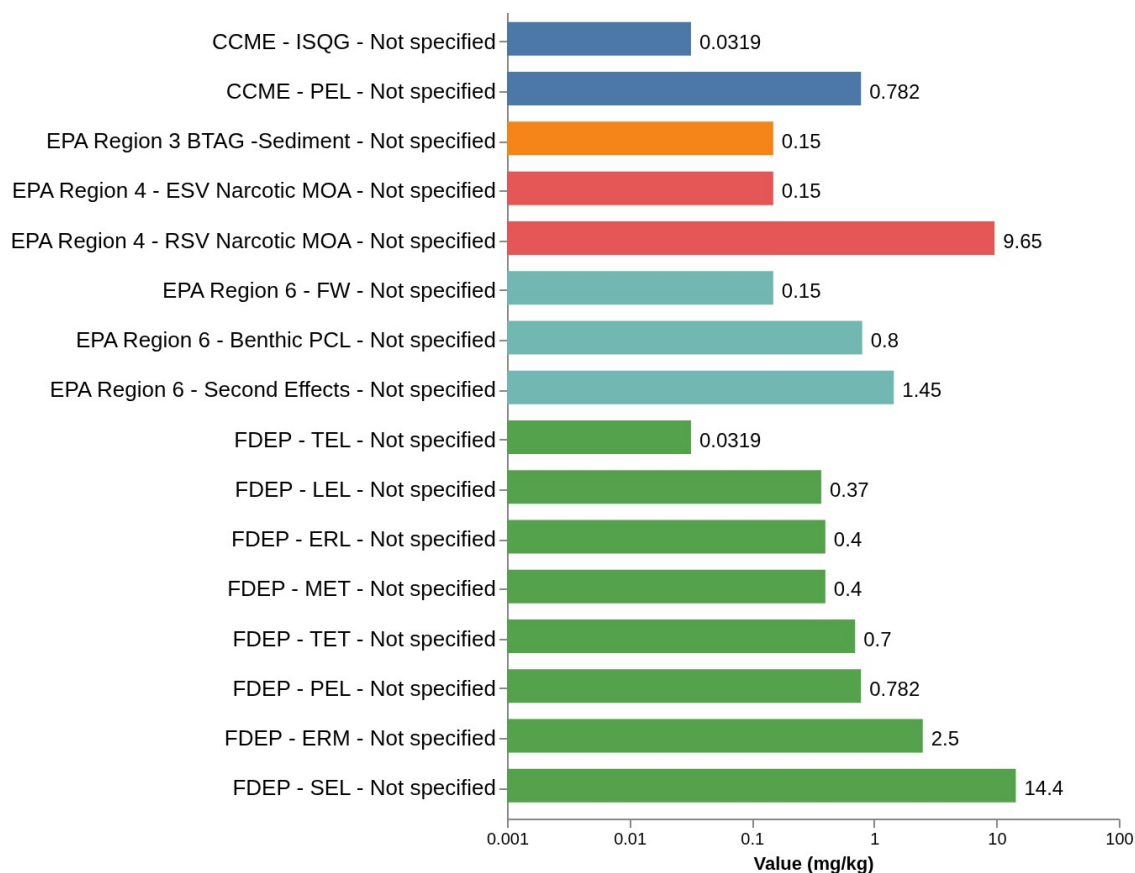


Table 30: Benchmark Values for Benzo[b+k]fluoranthene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
000000-07-8	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0272	

Benchmark Values for Benzo[b+k]fluoranthene in Sediment (Fresh Water)

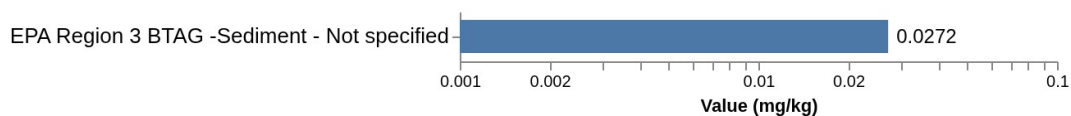
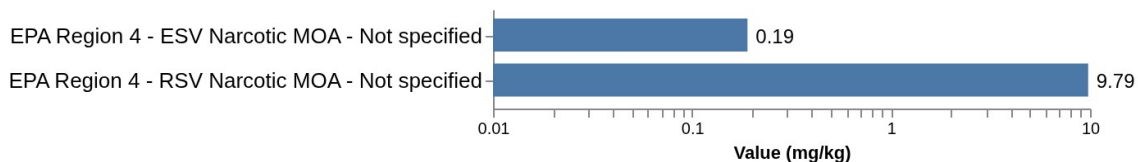
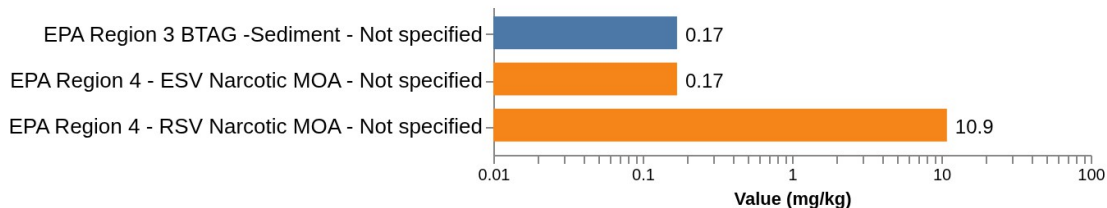


Table 31: Benchmark Values for Benzo[b]fluoranthene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
205–99–2	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.19	7, 28
205–99–2	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	9.79	7

Benchmark Values for Benzo[b]fluoranthene in Sediment (Fresh Water)**Table 32: Benchmark Values for Benzo[g,h,i]perylene in Sediment (Fresh Water)**

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
191–24–2	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.17	
191–24–2	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.17	7, 28
191–24–2	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	10.90	7

Benchmark Values for Benzo[g,h,i]perylene in Sediment (Fresh Water)**Table 33: Benchmark Values for Benzo[k]fluoranthene in Sediment (Fresh Water)**

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
207–08–9	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.24	
207–08–9	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.24	7, 28
207–08–9	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	9.81	7

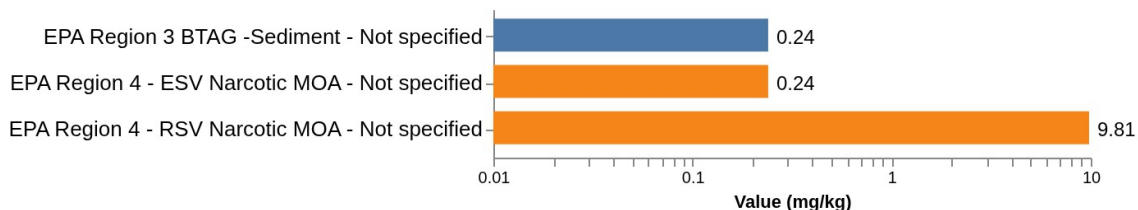
Benchmark Values for Benzo[k]fluoranthene in Sediment (Fresh Water)

Table 34: Benchmark Values for Benzoic Acid in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
65-85-0	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.650
65-85-0	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.019
65-85-0	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	2.000
65-85-0	EPA Region 6	Sediment Freshwater	Not specified	2.900
65-85-0	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	3.350
65-85-0	EPA Region 6	Sediment Freshwater Second Effects	Not specified	3.800
65-85-0	Washington	Freshwater Sediment Cleanup Objective	Not specified	2.900
65-85-0	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	3.800

Benchmark Values for Benzoic Acid in Sediment (Fresh Water)

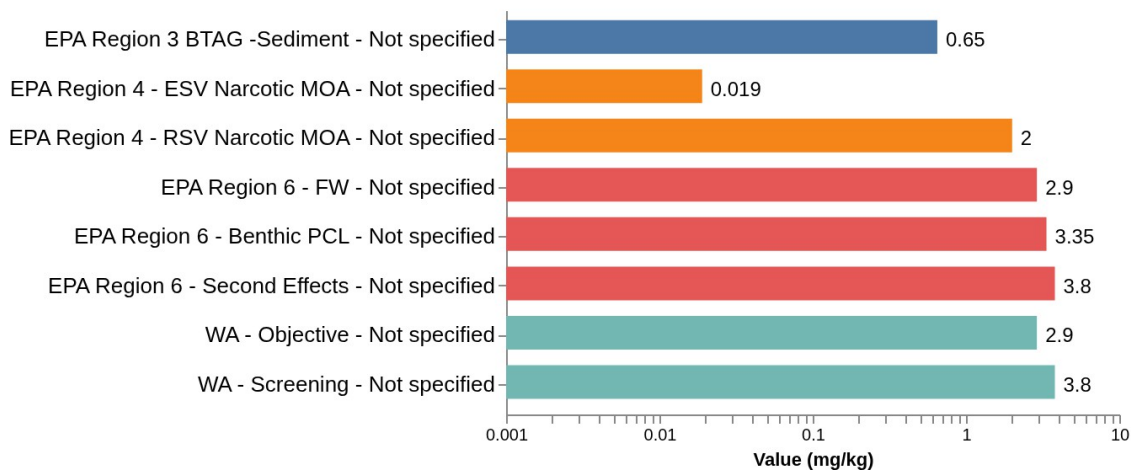


Table 35: Benchmark Values for Benzyl Alcohol in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
100-51-6	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.0037
100-51-6	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	6.7290

Benchmark Values for Benzyl Alcohol in Sediment (Fresh Water)

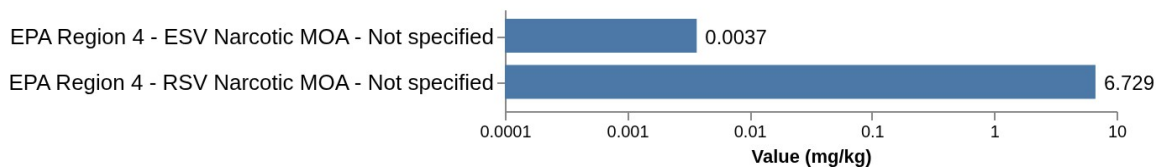


Table 36: Benchmark Values for Biphenthrin in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
82657-04-3	New York DEC	Freshwater Sediment Class A	Not specified	0.0016	23
82657-04-3	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.0016	
82657-04-3	New York DEC	Freshwater Sediment Class C	Not specified	0.0140	22
82657-04-3	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	0.0140	

Benchmark Values for Biphenthrin in Sediment (Fresh Water)

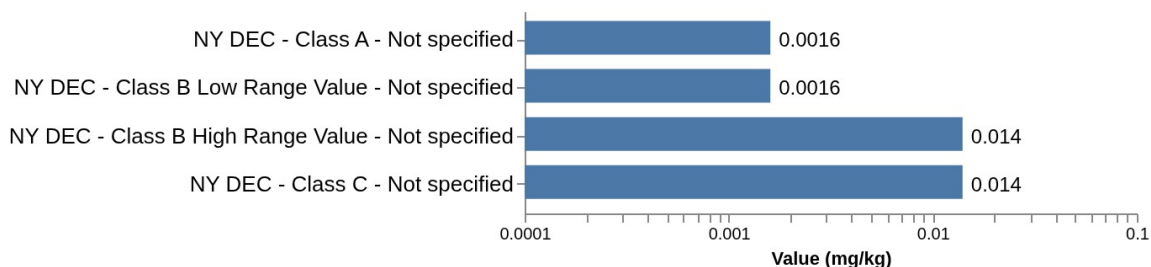


Table 37: Benchmark Values for Biphenyl, 1,1'- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
92-52-4	EPA Region 3	BTAG – Freshwater Sediment	Not specified	1.220
92-52-4	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.198
92-52-4	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	1.494
92-52-4	EPA Region 6	Sediment Freshwater	Not specified	1.100
92-52-4	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	4.800
92-52-4	EPA Region 6	Sediment Freshwater Second Effects	Not specified	8.500

Benchmark Values for Biphenyl, 1,1'- in Sediment (Fresh Water)

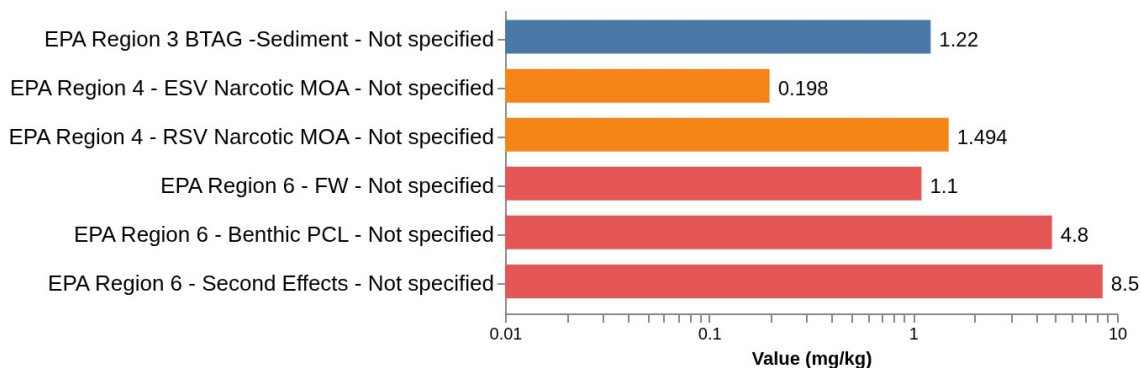


Table 38: Benchmark Values for Bis(2-chloroethyl)ether in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
111-44-4	EPA Region 4	Freshwater Refinement Screening Value	Not specified	8.163

Benchmark Values for Bis(2-chloroethyl)ether in Sediment (Fresh Water)

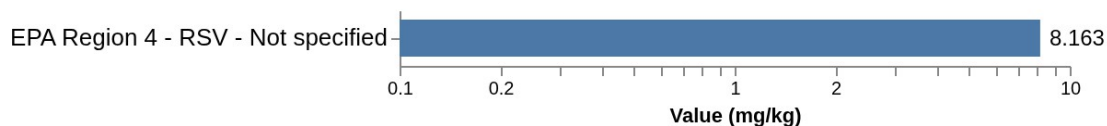


Table 39: Benchmark Values for Bis(2-ethylhexyl)phthalate in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
117-81-7	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.18	
117-81-7	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.18	7, 28
117-81-7	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	2.60	7
117-81-7	EPA Region 6	Sediment Freshwater	Not specified	0.50	
117-81-7	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	11.30	
117-81-7	EPA Region 6	Sediment Freshwater Second Effects	Not specified	22.00	
117-81-7	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	360.00	22
117-81-7	New York DEC	Freshwater Sediment Class A	Not specified	360.00	23
117-81-7	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.50	
117-81-7	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	22.00	

Benchmark Values for Bis(2-ethylhexyl)phthalate in Sediment (Fresh Water)

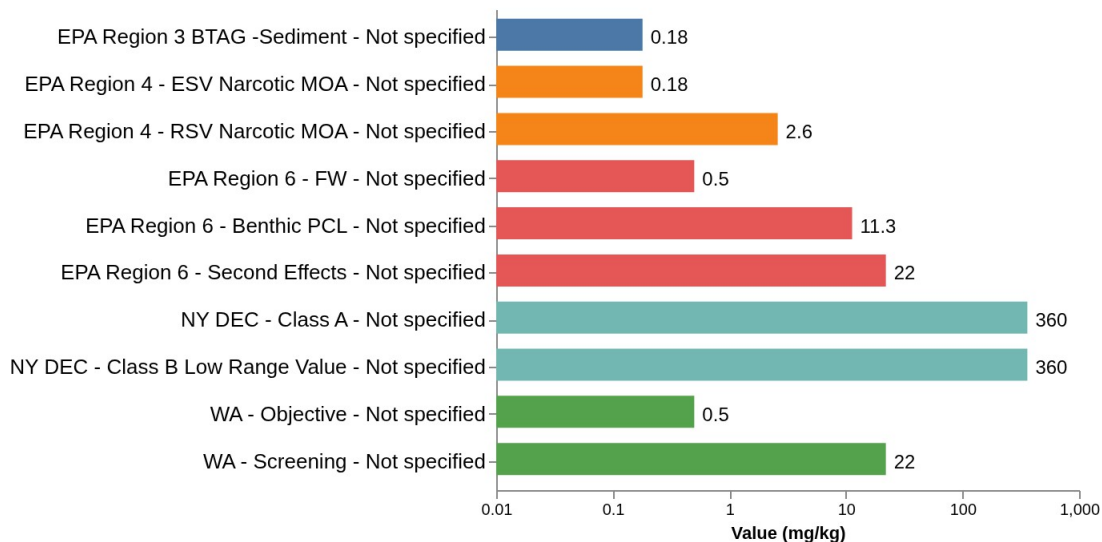


Table 40: Benchmark Values for Bromodichloromethane in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
75-27-4	EPA Region 4	Sediment ESV	Not specified	0.21
75-27-4	EPA Region 6	Sediment Freshwater	Not specified	2.46
75-27-4	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	8.60
75-27-4	EPA Region 6	Sediment Freshwater Second Effects	Not specified	14.74

Benchmark Values for Bromodichloromethane in Sediment (Fresh Water)

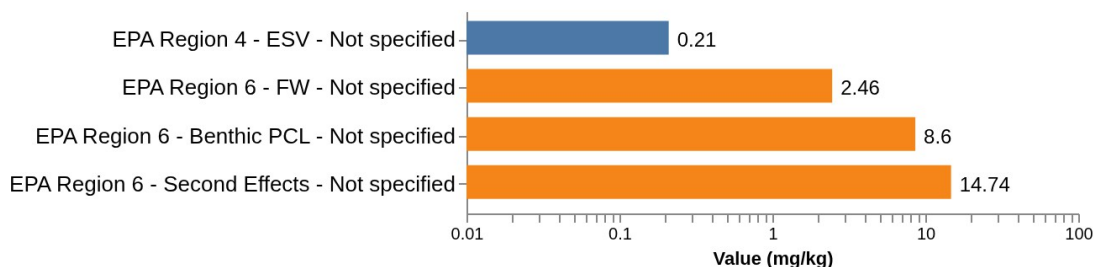


Table 41: Benchmark Values for Bromodiphenyl Ether, p- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
101-55-3	EPA Region 3	BTAG – Freshwater Sediment	Not specified	1.230
101-55-3	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.047
101-55-3	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.062

Benchmark Values for Bromodiphenyl Ether, p- in Sediment (Fresh Water)

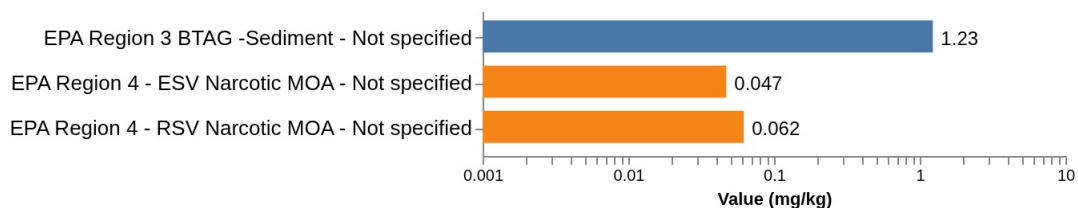
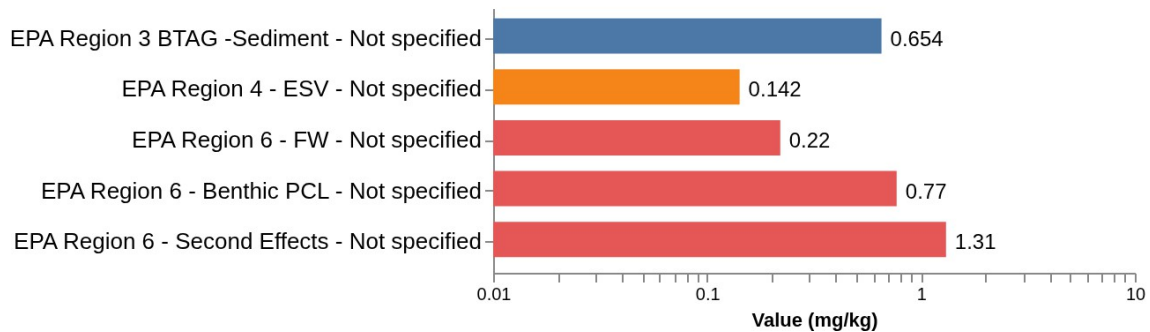


Table 42: Benchmark Values for Bromoform in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
75-25-2	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.654
75-25-2	EPA Region 4	Sediment ESV	Not specified	0.142
75-25-2	EPA Region 6	Sediment Freshwater	Not specified	0.220
75-25-2	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.770
75-25-2	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1.310

Benchmark Values for Bromoform in Sediment (Fresh Water)**Table 43: Benchmark Values for Bromomethane in Sediment (Fresh Water)**

CAS	Source	Benchmark	Organism	Value (mg/kg)
74-83-9	EPA Region 4	Sediment ESV	Not specified	0.0065
74-83-9	EPA Region 6	Sediment Freshwater	Not specified	0.0800
74-83-9	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.2700
74-83-9	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.4600

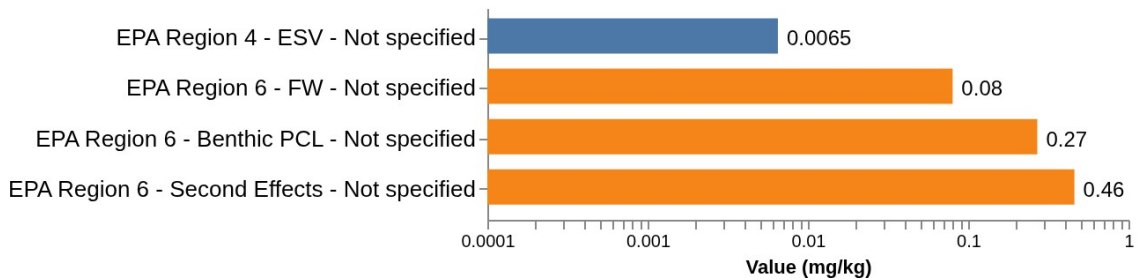
Benchmark Values for Bromomethane in Sediment (Fresh Water)

Table 44: Benchmark Values for Butyl Benzyl Phthalate in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
85-68-7	EPA Region 3	BTAG – Freshwater Sediment	Not specified	10.900	28
85-68-7	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.100	
85-68-7	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.481	
85-68-7	EPA Region 6	Sediment Freshwater	Not specified	11.000	
85-68-7	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	81.000	
85-68-7	EPA Region 6	Sediment Freshwater Second Effects	Not specified	150.000	

Benchmark Values for Butyl Benzyl Phthalate in Sediment (Fresh Water)

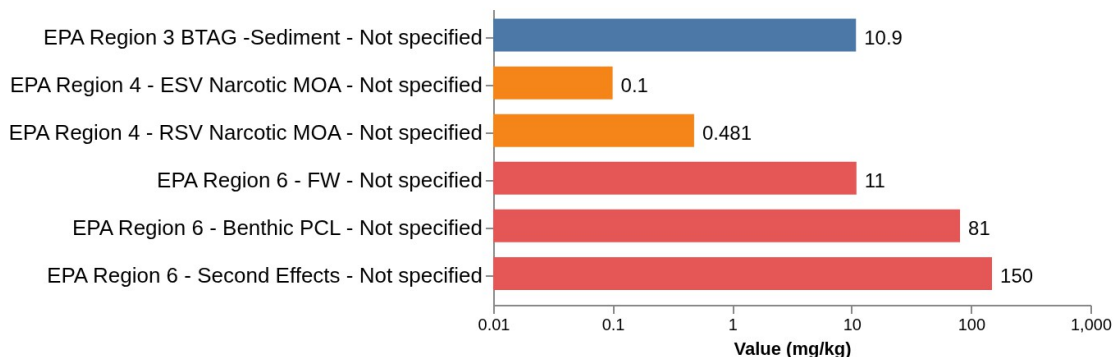


Table 45: Benchmark Values for Butylbenzene, n- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
104-51-8	EPA Region 6	Sediment Freshwater	Not specified	1.09
104-51-8	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	3.83
104-51-8	EPA Region 6	Sediment Freshwater Second Effects	Not specified	6.57

Benchmark Values for Butylbenzene, n- in Sediment (Fresh Water)

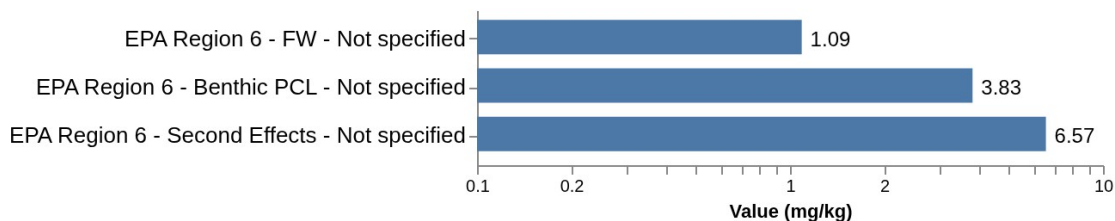


Table 46: Benchmark Values for Butylbenzene, sec- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
135-98-8	EPA Region 6	Sediment Freshwater	Not specified	0.88
135-98-8	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	3.08
135-98-8	EPA Region 6	Sediment Freshwater Second Effects	Not specified	5.28

Benchmark Values for Butylbenzene, sec- in Sediment (Fresh Water)

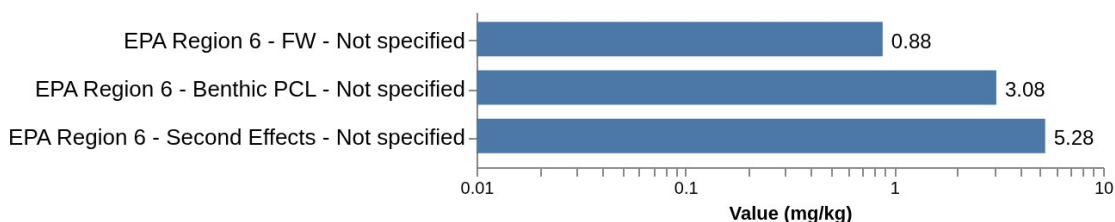


Table 47: Benchmark Values for Butylbenzene, tert- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
98-06-6	EPA Region 6	Sediment Freshwater	Not specified	1.21
98-06-6	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	4.24
98-06-6	EPA Region 6	Sediment Freshwater Second Effects	Not specified	7.26

Benchmark Values for Butylbenzene, tert- in Sediment (Fresh Water)

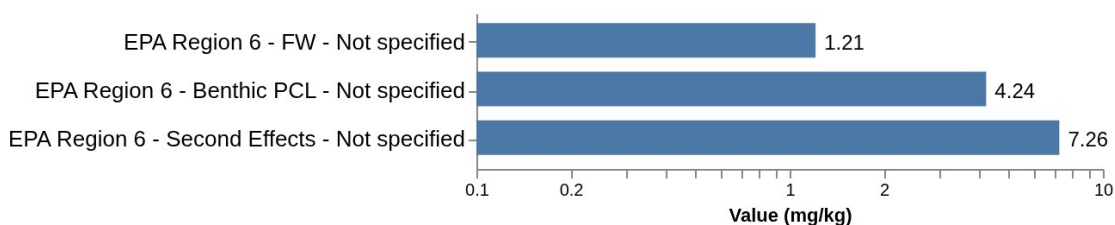
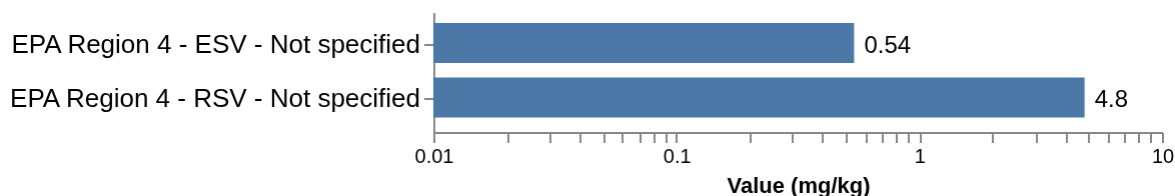


Table 48: Benchmark Values for Butyltin in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
78763-54-9	EPA Region 4	Sediment ESV	Not specified	0.54
78763-54-9	EPA Region 4	Freshwater Refinement Screening Value	Not specified	4.80

Benchmark Values for Butyltin in Sediment (Fresh Water)**Table 49: Benchmark Values for Cadmium (Diet) in Sediment (Fresh Water)**

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
7440-43-9	Canada	Sediment Freshwater ISQG	Not specified	0.600	
7440-43-9	Canada	Sediment Freshwater PEL	Not specified	3.500	
7440-43-9	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.990	
7440-43-9	EPA Region 4	Sediment ESV	Not specified	1.000	
7440-43-9	EPA Region 4	Freshwater Refinement Screening Value	Not specified	5.000	
7440-43-9	EPA Region 6	Sediment Freshwater	Not specified	0.990	
7440-43-9	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	2.985	
7440-43-9	EPA Region 6	Sediment Freshwater Second Effects	Not specified	4.980	
7440-43-9	Florida	Freshwater TEL	Not specified	0.596	
7440-43-9	Florida	Freshwater LEL	Not specified	0.600	
7440-43-9	Florida	Freshwater MET	Not specified	0.900	
7440-43-9	Florida	Freshwater TET	Not specified	3.000	
7440-43-9	Florida	Freshwater PEL	Not specified	3.530	
7440-43-9	Florida	Freshwater ERL	Not specified	5.000	
7440-43-9	Florida	Freshwater ERM	Not specified	9.000	
7440-43-9	Florida	Freshwater SEL	Not specified	10.000	
7440-43-9	New York DEC	Freshwater Sediment Class A	Not specified	1.000	23
7440-43-9	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	1.000	
7440-43-9	New York DEC	Freshwater Sediment Class C	Not specified	5.000	22
7440-43-9	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	5.000	
7440-43-9	Washington	Freshwater Sediment Cleanup Objective	Not specified	2.100	
7440-43-9	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	5.400	

Benchmark Values for Cadmium (Diet) in Sediment (Fresh Water)

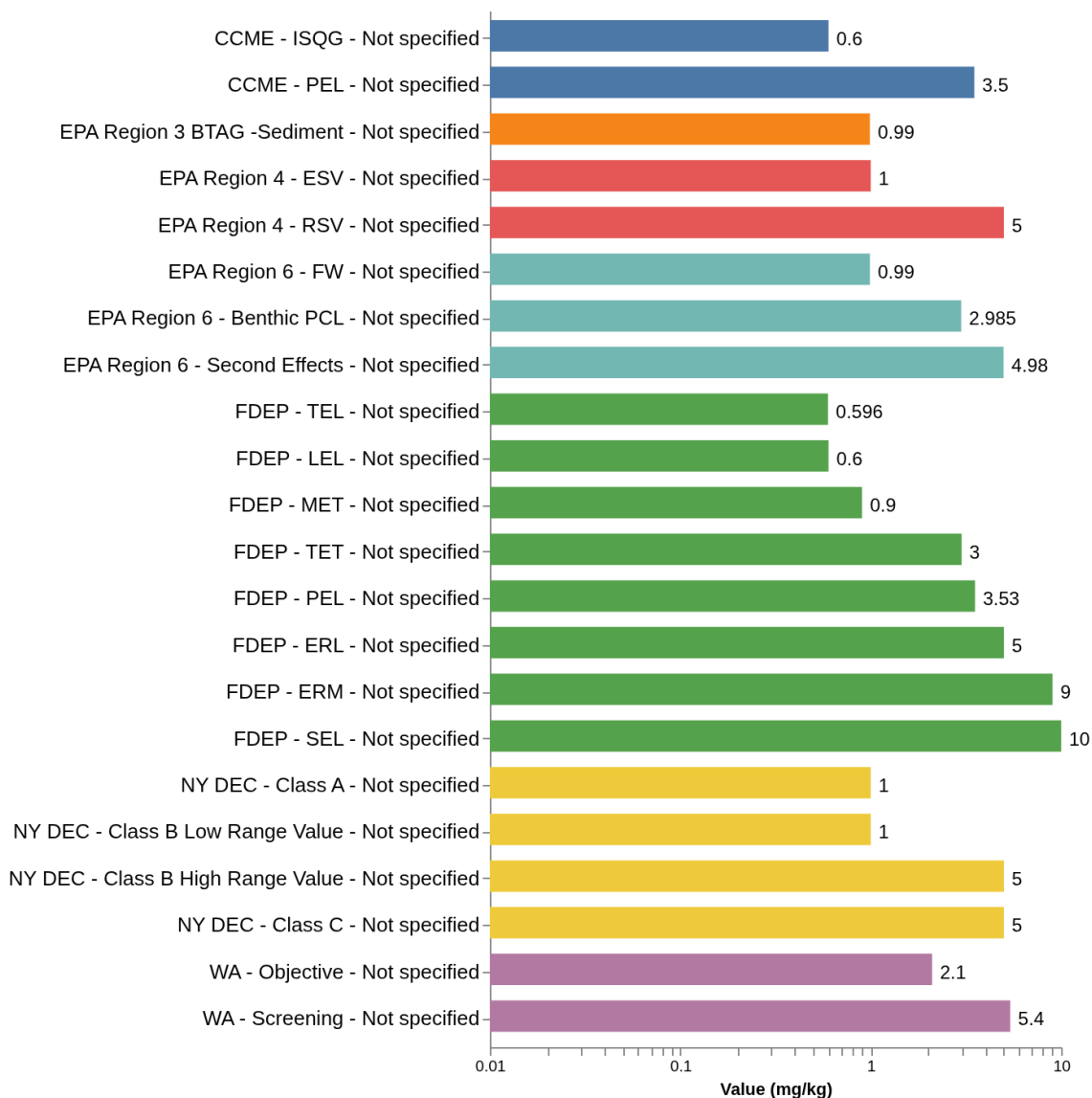


Table 50: Benchmark Values for Captan in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
133-06-2	EPA Region 4	Sediment ESV	Not specified	0.047
133-06-2	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.051

Benchmark Values for Captan in Sediment (Fresh Water)

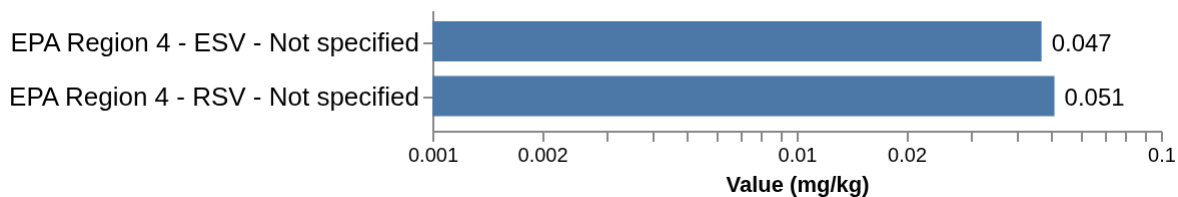


Table 51: Benchmark Values for Carbaryl in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
63-25-2	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.000418	
63-25-2	EPA Region 4	Sediment ESV	Not specified	0.000300	
63-25-2	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.006000	28
63-25-2	New York DEC	Freshwater Sediment Class A	Not specified	0.006000	23
63-25-2	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.006000	
63-25-2	New York DEC	Freshwater Sediment Class C	Not specified	0.010000	22
63-25-2	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	0.010000	

Benchmark Values for Carbaryl in Sediment (Fresh Water)

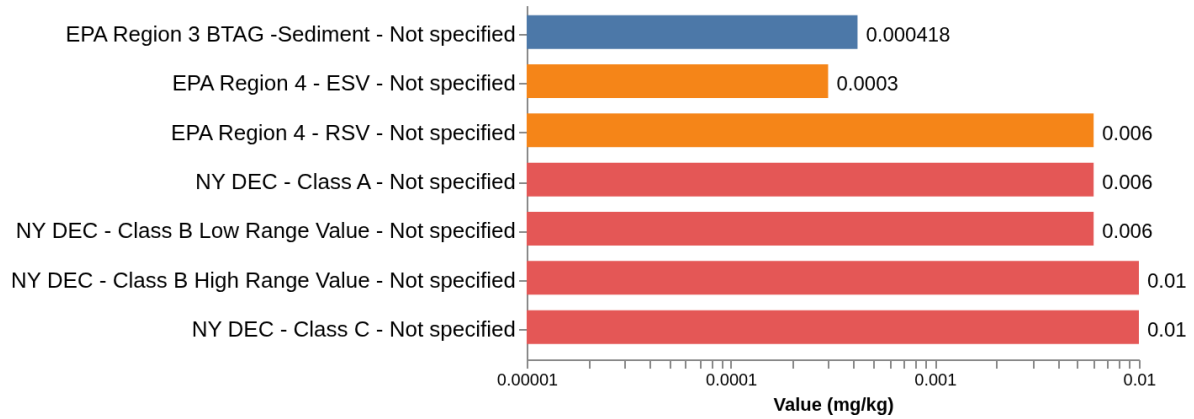


Table 52: Benchmark Values for Carbazole in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
86-74-8	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.069
86-74-8	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	4.561
86-74-8	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.900
86-74-8	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	1.100

Benchmark Values for Carbazole in Sediment (Fresh Water)

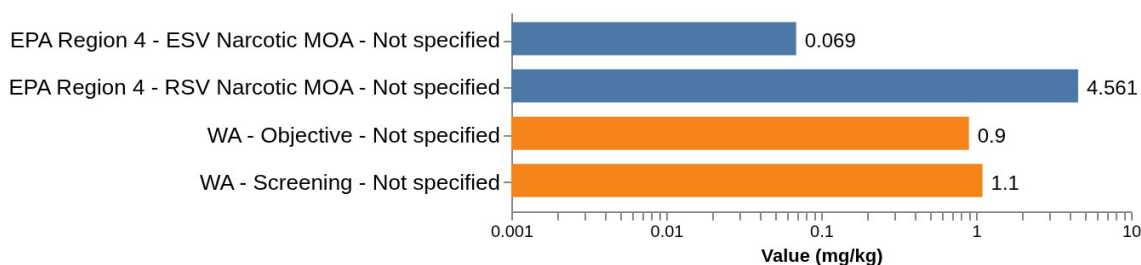


Table 53: Benchmark Values for Carbofuran in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
1563-66-2	EPA Region 3	BTAG - Freshwater Sediment	Not specified	0.00344	
1563-66-2	EPA Region 4	Sediment ESV	Not specified	0.00090	
1563-66-2	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.00400	28
1563-66-2	New York DEC	Freshwater Sediment Class A	Not specified	0.00400	23
1563-66-2	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.00400	
1563-66-2	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	0.03800	
1563-66-2	New York DEC	Freshwater Sediment Class C	Not specified	0.03800	22

Benchmark Values for Carbofuran in Sediment (Fresh Water)

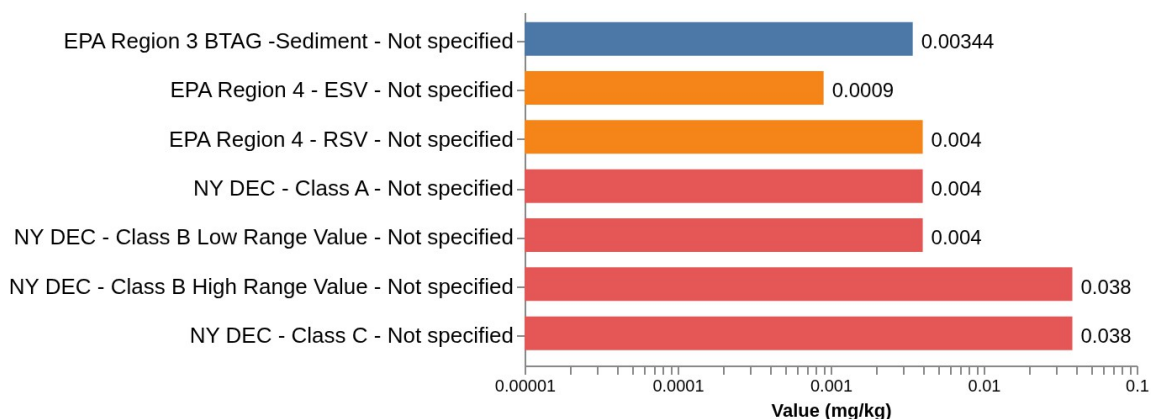


Table 54: Benchmark Values for Carbon Disulfide in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
75-15-0	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.000851
75-15-0	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.007800
75-15-0	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	1.580000
75-15-0	EPA Region 6	Sediment Freshwater	Not specified	0.120000
75-15-0	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.450000
75-15-0	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.780000

Benchmark Values for Carbon Disulfide in Sediment (Fresh Water)

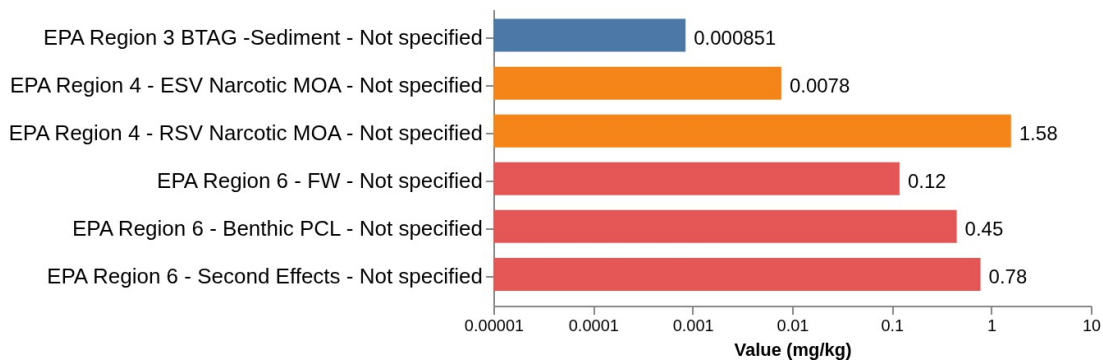


Table 55: Benchmark Values for Carbon Tetrachloride in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
56-23-5	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0642	
56-23-5	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.0570	
56-23-5	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.7060	
56-23-5	EPA Region 6	Sediment Freshwater	Not specified	1.2000	
56-23-5	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	11.1000	
56-23-5	EPA Region 6	Sediment Freshwater Second Effects	Not specified	21.0000	
56-23-5	New York DEC	Freshwater Sediment Class A	Not specified	1.0700	23
56-23-5	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	1.0700	
56-23-5	New York DEC	Freshwater Sediment Class C	Not specified	9.6000	22
56-23-5	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	9.6000	

Benchmark Values for Carbon Tetrachloride in Sediment (Fresh Water)

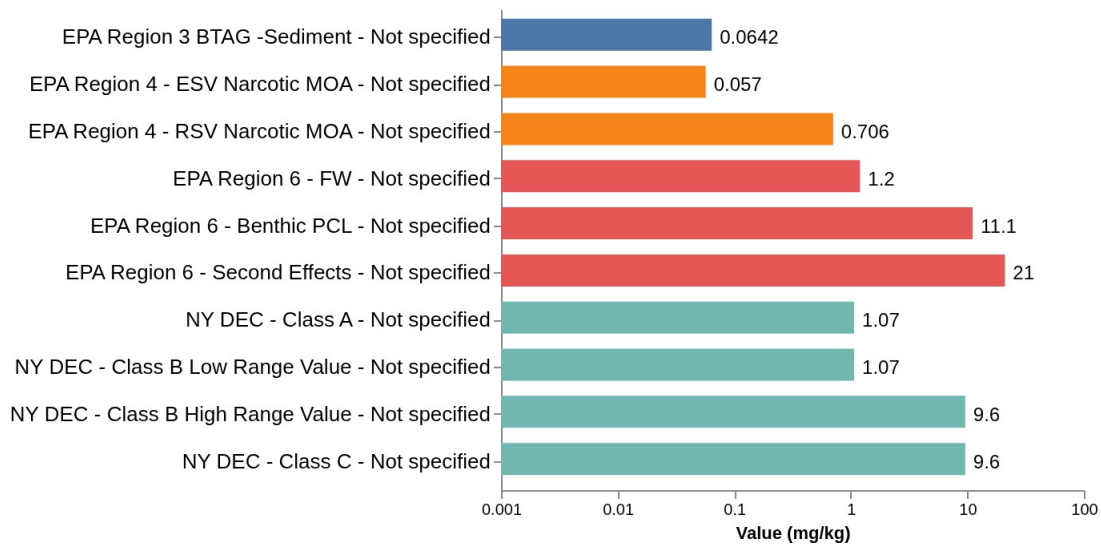


Table 56: Benchmark Values for Chlordane in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
57-74-9	Canada	Sediment Freshwater ISQG	Not specified	0.00450	
57-74-9	Canada	Sediment Freshwater PEL	Not specified	0.00887	
57-74-9	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.00324	
57-74-9	EPA Region 4	Sediment ESV	Wildlife only	0.00006	7, 28
57-74-9	EPA Region 4	Sediment ESV	Aquatic and wildlife	0.00320	7, 28
57-74-9	EPA Region 4	Freshwater Refinement Screening Value	Aquatic and wildlife	0.01800	7, 28
57-74-9	EPA Region 4	Freshwater Refinement Screening Value	Wildlife only	1.70000	7, 28
57-74-9	EPA Region 6	Sediment Freshwater	Not specified	0.00324	
57-74-9	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.01000	
57-74-9	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.01760	
57-74-9	Florida	Freshwater ERL	Not specified	0.00050	
57-74-9	Florida	Freshwater TEL	Not specified	0.00450	
57-74-9	Florida	Freshwater ERM	Not specified	0.00600	
57-74-9	Florida	Freshwater MET	Not specified	0.00700	
57-74-9	Florida	Freshwater LEL	Not specified	0.00700	
57-74-9	Florida	Freshwater PEL	Not specified	0.00890	
57-74-9	Florida	Freshwater TET	Not specified	0.03000	
57-74-9	Florida	Freshwater SEL	Not specified	0.06000	
57-74-9	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.06800	
57-74-9	New York DEC	Freshwater Sediment Class A	Not specified	0.06800	23
57-74-9	New York DEC	Freshwater Sediment Class C	Not specified	38.00000	22
57-74-9	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	38.00000	

Benchmark Values for Chlordane in Sediment (Fresh Water)

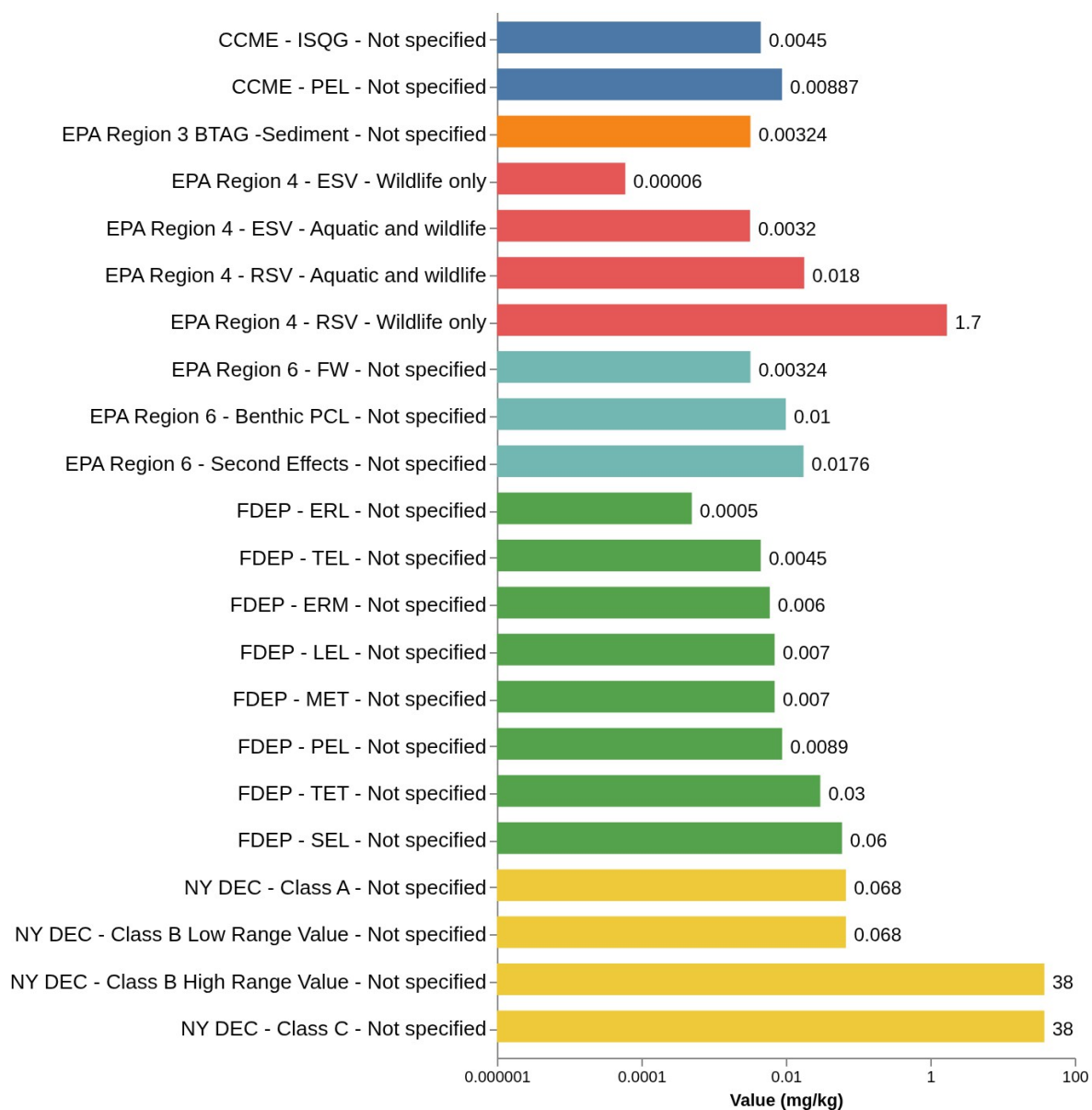


Table 57: Benchmark Values for Chloroaniline, p- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
106-47-8	EPA Region 4	Sediment ESV	Not specified	0.0009
106-47-8	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.0210

Benchmark Values for Chloroaniline, p- in Sediment (Fresh Water)

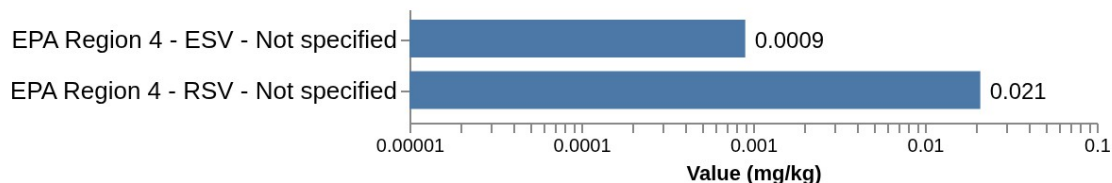


Table 58: Benchmark Values for Chlorobenzene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
108-90-7	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.00842	
108-90-7	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.03000	28
108-90-7	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.93900	
108-90-7	EPA Region 6	Sediment Freshwater	Not specified	0.74000	
108-90-7	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	1.87000	
108-90-7	EPA Region 6	Sediment Freshwater Second Effects	Not specified	3.00000	
108-90-7	New York DEC	Freshwater Sediment Class A	Not specified	0.20000	23
108-90-7	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.20000	
108-90-7	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	1.70000	
108-90-7	New York DEC	Freshwater Sediment Class C	Not specified	1.70000	22

Benchmark Values for Chlorobenzene in Sediment (Fresh Water)

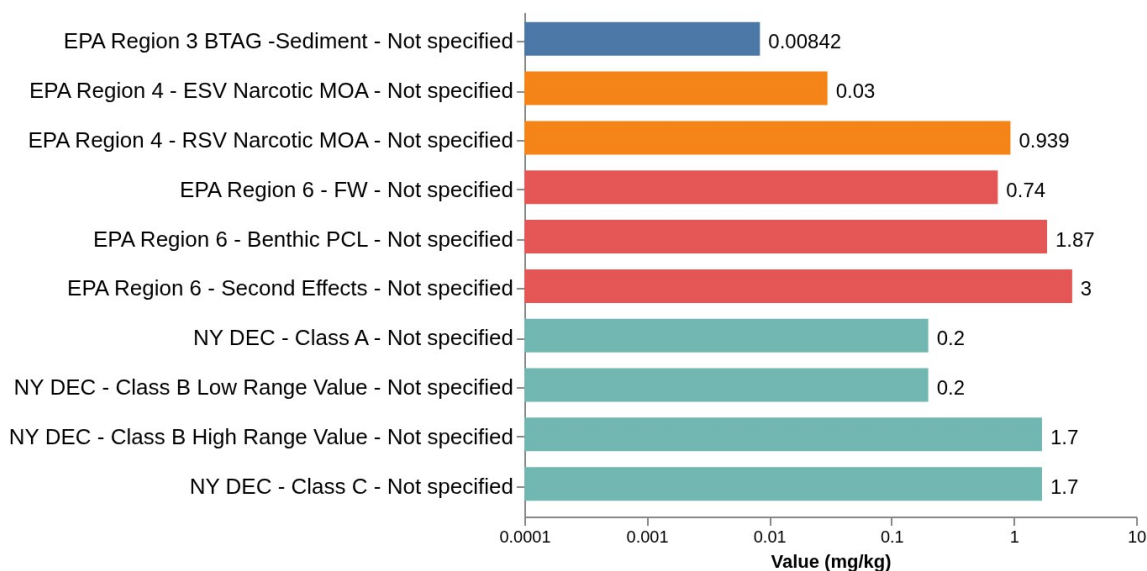


Table 59: Benchmark Values for Chlorobenzilate in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
510-15-6	EPA Region 3	BTAG – Freshwater Sediment	Not specified	1.45

Benchmark Values for Chlorobenzilate in Sediment (Fresh Water)



Table 60: Benchmark Values for Chloroform in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
67-66-3	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.087
67-66-3	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	3.352
67-66-3	EPA Region 6	Sediment Freshwater	Not specified	1.889
67-66-3	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	3.780
67-66-3	EPA Region 6	Sediment Freshwater Second Effects	Not specified	5.670

Benchmark Values for Chloroform in Sediment (Fresh Water)

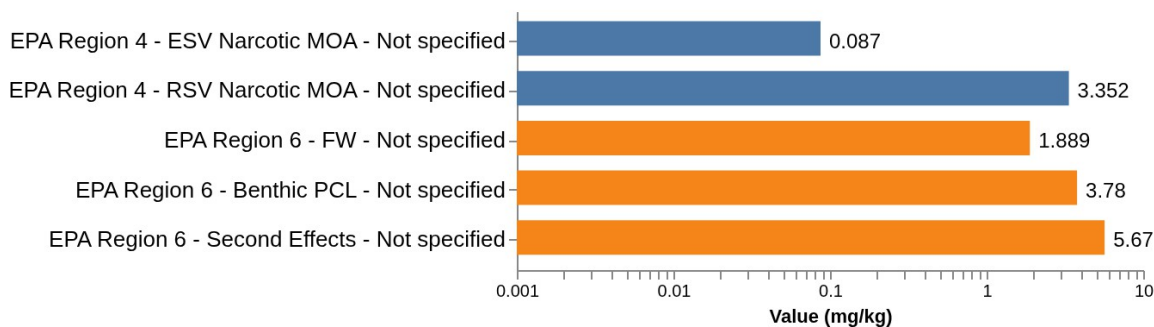


Table 61: Benchmark Values for Chloromethane in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
74-87-3	EPA Region 6	Sediment Freshwater	Not specified	17.8
74-87-3	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	62.3
74-87-3	EPA Region 6	Sediment Freshwater Second Effects	Not specified	106.8

Benchmark Values for Chloromethane in Sediment (Fresh Water)

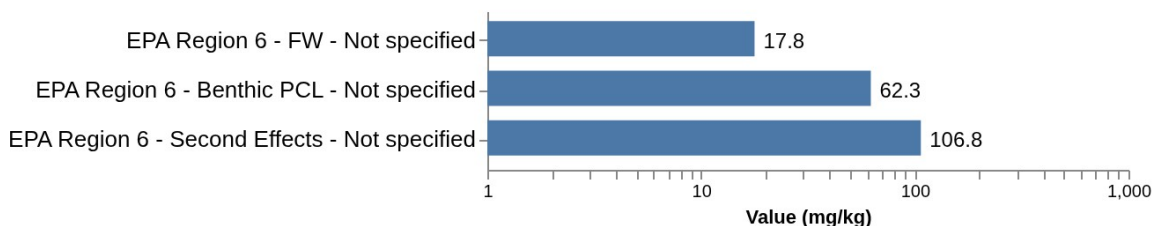


Table 62: Benchmark Values for Chlorophenol, 2- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
95-57-8	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0312	
95-57-8	EPA Region 4	Sediment ESV	Not specified	0.0550	28
95-57-8	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.5500	28

Benchmark Values for Chlorophenol, 2- in Sediment (Fresh Water)

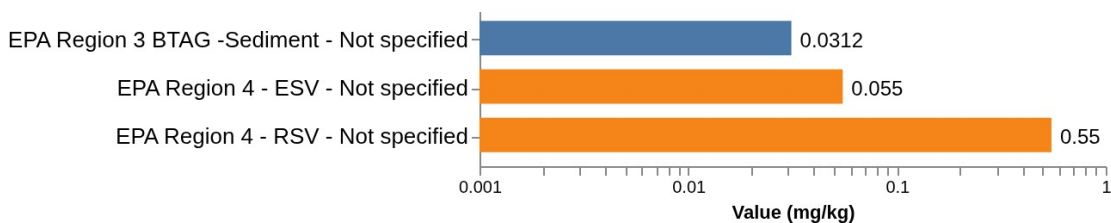


Table 63: Benchmark Values for Chlorothalonil in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
1897-45-6	EPA Region 4	Sediment ESV	Not specified	0.0064	
1897-45-6	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.0620	28
1897-45-6	New York DEC	Freshwater Sediment Class A	Not specified	0.0070	23
1897-45-6	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.0070	
1897-45-6	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	0.0620	
1897-45-6	New York DEC	Freshwater Sediment Class C	Not specified	0.0620	22

Benchmark Values for Chlorothalonil in Sediment (Fresh Water)

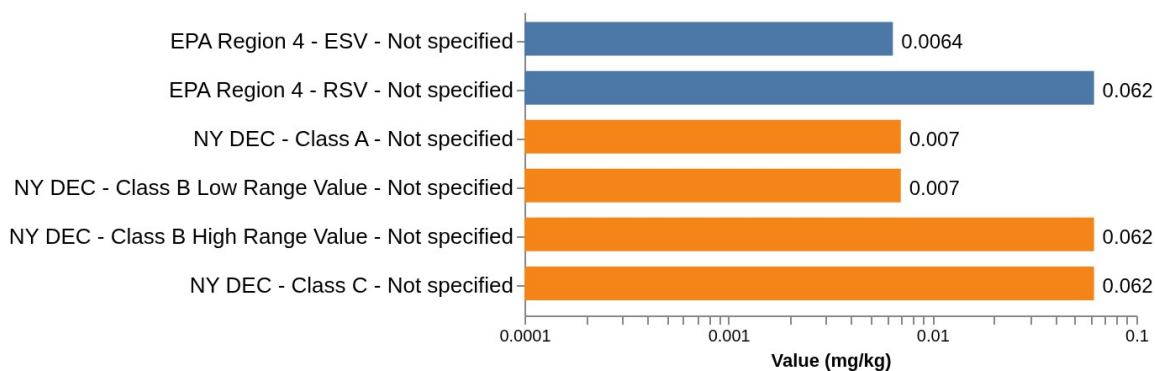


Table 64: Benchmark Values for Chlorpyrifos in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
2921-88-2	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.00519	
2921-88-2	EPA Region 4	Sediment ESV	Not specified	0.00300	
2921-88-2	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.01200	28
2921-88-2	New York DEC	Freshwater Sediment Class A	Not specified	0.01200	23
2921-88-2	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.01200	
2921-88-2	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	0.06300	
2921-88-2	New York DEC	Freshwater Sediment Class C	Not specified	0.06300	22

Benchmark Values for Chlorpyrifos in Sediment (Fresh Water)

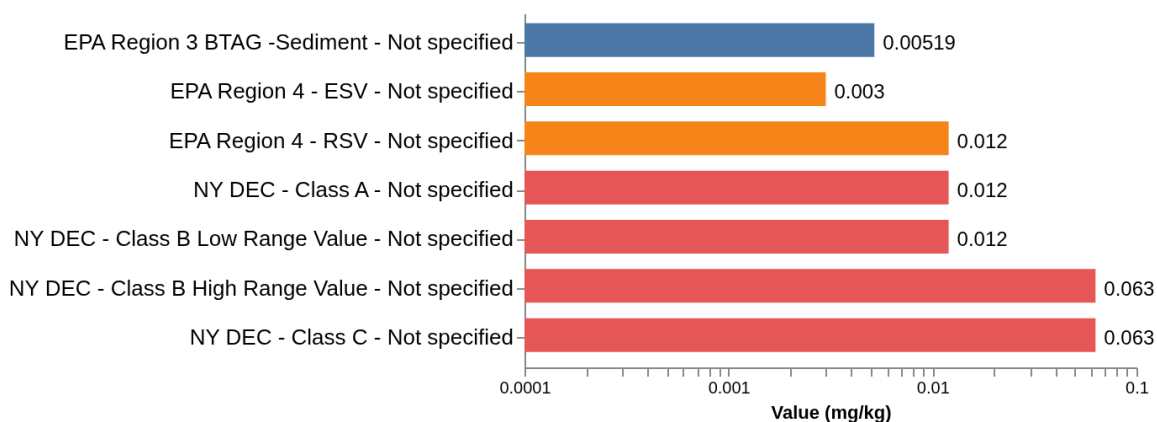


Table 65: Benchmark Values for Chromium, Total in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
7440-47-3	Canada	Sediment Freshwater ISQG	Not specified	37.3	
7440-47-3	Canada	Sediment Freshwater PEL	Not specified	90.0	
7440-47-3	EPA Region 3	BTAG – Freshwater Sediment	Not specified	43.4	
7440-47-3	EPA Region 4	Sediment ESV	Not specified	43.4	
7440-47-3	EPA Region 4	Freshwater Refinement Screening Value	Not specified	111.0	
7440-47-3	EPA Region 6	Sediment Freshwater	Not specified	43.4	
7440-47-3	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	77.2	
7440-47-3	EPA Region 6	Sediment Freshwater Second Effects	Not specified	111.0	
7440-47-3	Florida	Freshwater LEL	Not specified	26.0	
7440-47-3	Florida	Freshwater TEL	Not specified	37.3	
7440-47-3	Florida	Freshwater MET	Not specified	55.0	
7440-47-3	Florida	Freshwater ERL	Not specified	80.0	
7440-47-3	Florida	Freshwater PEL	Not specified	90.0	
7440-47-3	Florida	Freshwater TET	Not specified	100.0	
7440-47-3	Florida	Freshwater SEL	Not specified	110.0	
7440-47-3	Florida	Freshwater ERM	Not specified	145.0	
7440-47-3	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	43.0	
7440-47-3	New York DEC	Freshwater Sediment Class A	Not specified	43.0	23
7440-47-3	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	110.0	
7440-47-3	New York DEC	Freshwater Sediment Class C	Not specified	110.0	22
7440-47-3	Washington	Freshwater Sediment Cleanup Objective	Not specified	72.0	
7440-47-3	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	88.0	

Benchmark Values for Chromium, Total in Sediment (Fresh Water)

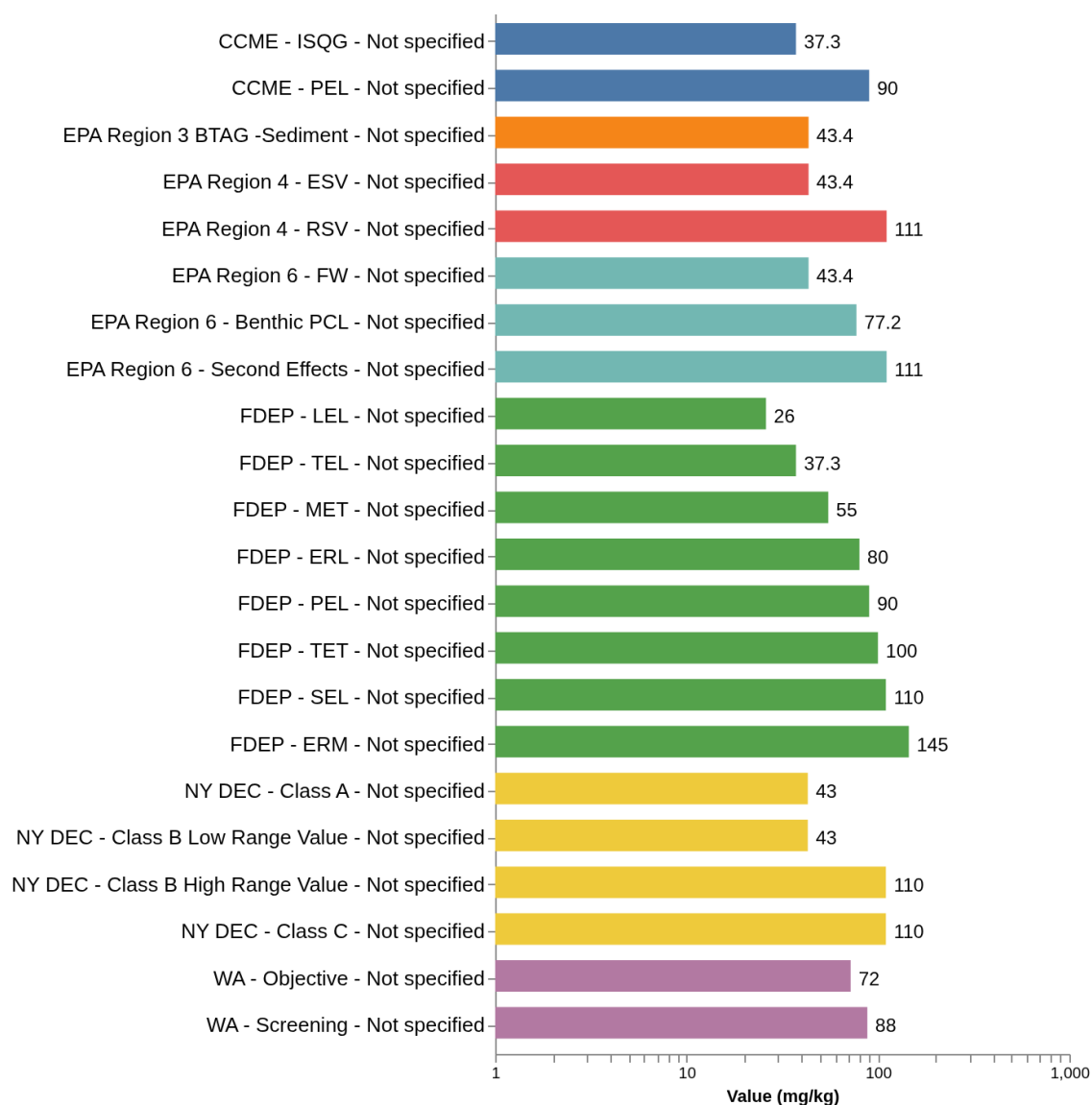


Table 66: Benchmark Values for Chrysene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
218-01-9	Canada	Sediment Freshwater ISQG	Not specified	0.0571	
218-01-9	Canada	Sediment Freshwater PEL	Not specified	0.8620	
218-01-9	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.1660	
218-01-9	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.1660	7, 28
218-01-9	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	8.4400	7
218-01-9	EPA Region 6	Sediment Freshwater	Not specified	0.1660	
218-01-9	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.7300	
218-01-9	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1.2900	
218-01-9	Florida	Freshwater TEL	Not specified	0.0571	
218-01-9	Florida	Freshwater LEL	Not specified	0.3400	
218-01-9	Florida	Freshwater ERL	Not specified	0.4000	
218-01-9	Florida	Freshwater MET	Not specified	0.5000	
218-01-9	Florida	Freshwater TET	Not specified	0.8000	
218-01-9	Florida	Freshwater PEL	Not specified	0.8620	
218-01-9	Florida	Freshwater ERM	Not specified	2.8000	
218-01-9	Florida	Freshwater SEL	Not specified	4.6000	

Benchmark Values for Chrysene in Sediment (Fresh Water)

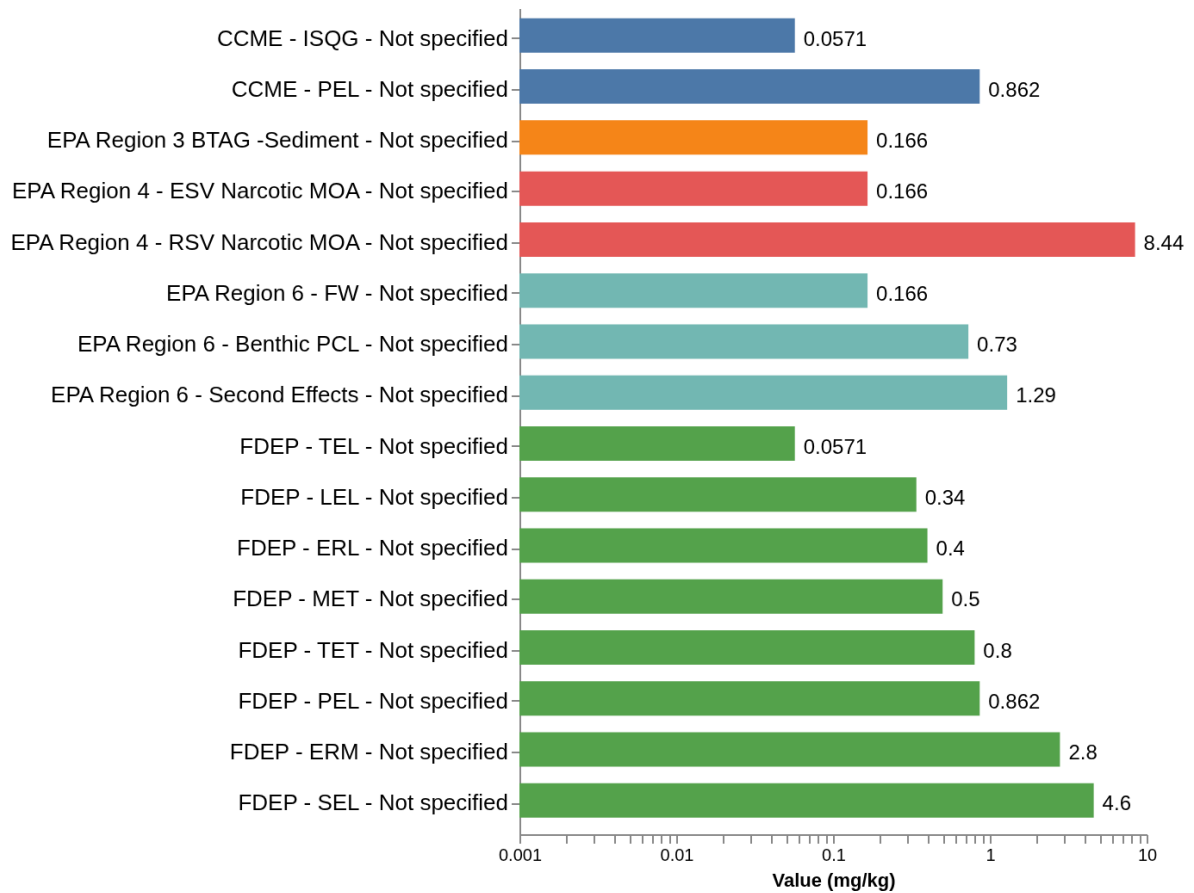


Table 67: Benchmark Values for Cobalt in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
7440-48-4	EPA Region 3	BTAG – Freshwater Sediment	Not specified	50.0
7440-48-4	EPA Region 4	Sediment ESV	Not specified	50.0
7440-48-4	EPA Region 6	Sediment Freshwater	Not specified	50.0

Benchmark Values for Cobalt in Sediment (Fresh Water)

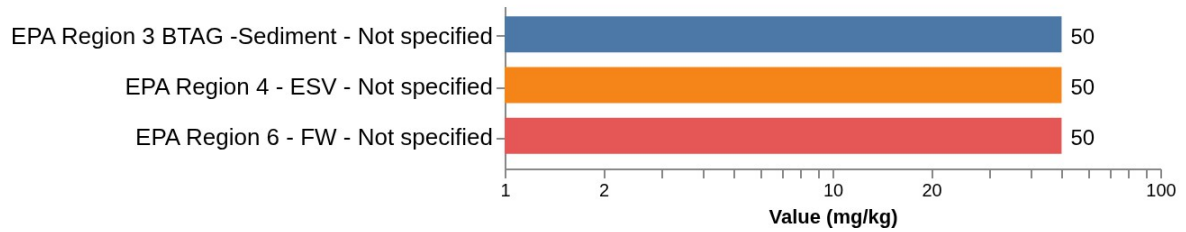


Table 68: Benchmark Values for Copper in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
7440-50-8	Canada	Sediment Freshwater ISQG	Not specified	35.7	
7440-50-8	Canada	Sediment Freshwater PEL	Not specified	197.0	
7440-50-8	EPA Region 3	BTAG – Freshwater Sediment	Not specified	31.6	
7440-50-8	EPA Region 4	Sediment ESV	Not specified	31.6	
7440-50-8	EPA Region 4	Freshwater Refinement Screening Value	Not specified	149.0	
7440-50-8	EPA Region 6	Sediment Freshwater	Not specified	31.6	
7440-50-8	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	90.3	
7440-50-8	EPA Region 6	Sediment Freshwater Second Effects	Not specified	149.0	
7440-50-8	Florida	Freshwater LEL	Not specified	16.0	
7440-50-8	Florida	Freshwater MET	Not specified	28.0	
7440-50-8	Florida	Freshwater TEL	Not specified	35.7	
7440-50-8	Florida	Freshwater ERL	Not specified	70.0	
7440-50-8	Florida	Freshwater TET	Not specified	86.0	
7440-50-8	Florida	Freshwater SEL	Not specified	110.0	
7440-50-8	Florida	Freshwater PEL	Not specified	197.0	
7440-50-8	Florida	Freshwater ERM	Not specified	390.0	
7440-50-8	New York DEC	Freshwater Sediment Class A	Not specified	32.0	23
7440-50-8	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	32.0	
7440-50-8	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	150.0	
7440-50-8	New York DEC	Freshwater Sediment Class C	Not specified	150.0	22
7440-50-8	Washington	Freshwater Sediment Cleanup Objective	Not specified	400.0	
7440-50-8	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	1200.0	

Benchmark Values for Copper in Sediment (Fresh Water)

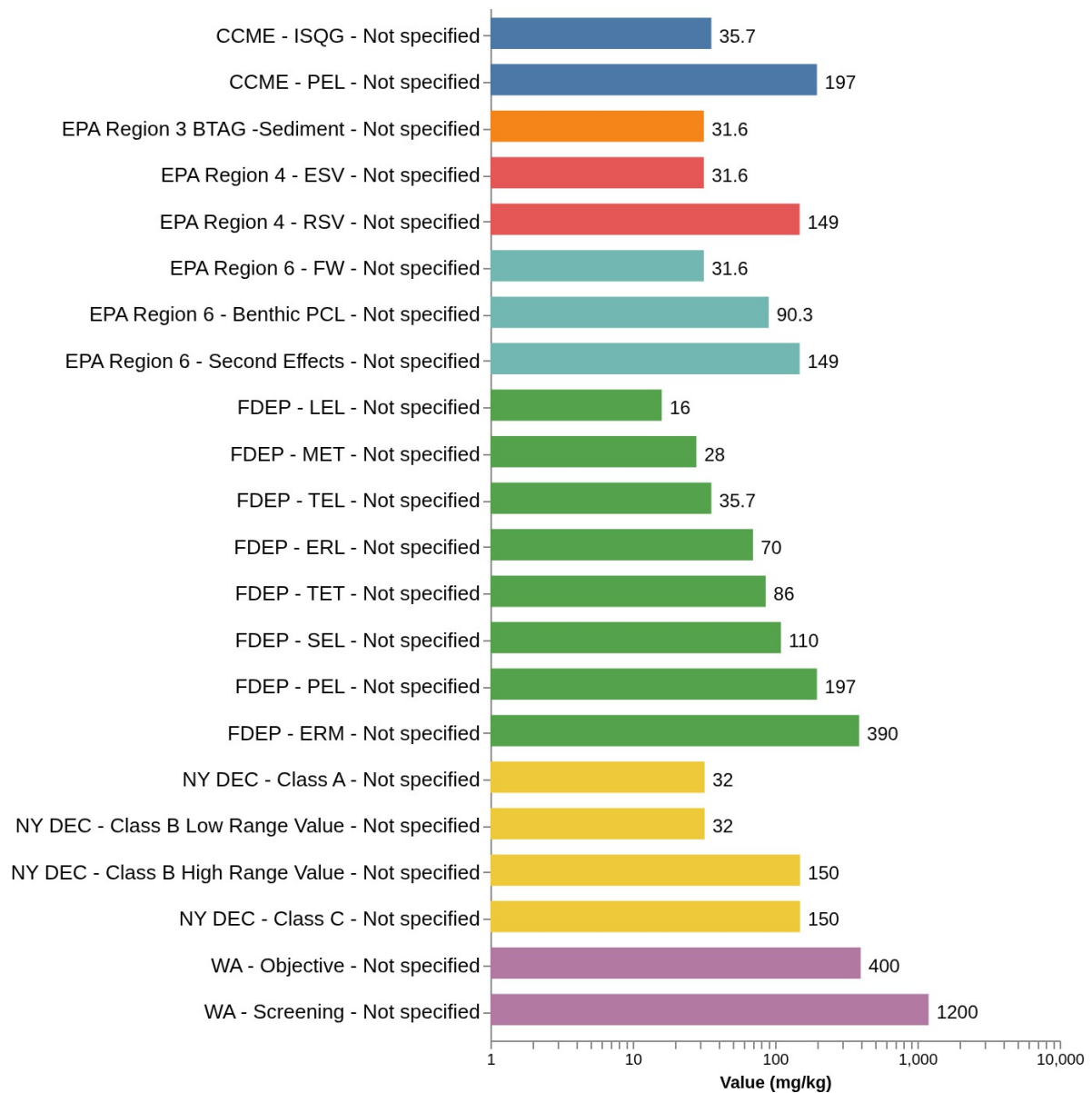


Table 69: Benchmark Values for Cresol, m- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
108-39-4	EPA Region 4	Sediment ESV	Not specified	0.112
108-39-4	EPA Region 4	Freshwater Refinement Screening Value	Not specified	1.792

Benchmark Values for Cresol, m- in Sediment (Fresh Water)

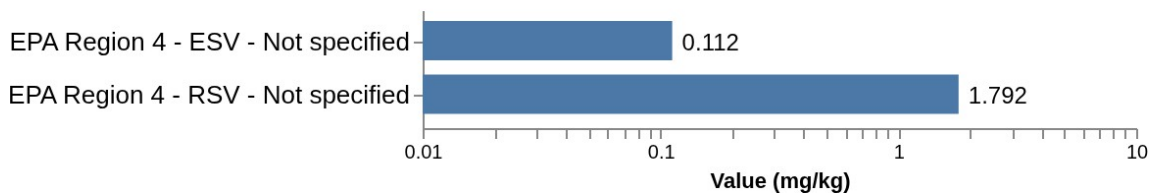


Table 70: Benchmark Values for Cresol, o- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
95-48-7	EPA Region 4	Sediment ESV	Not specified	0.119
95-48-7	EPA Region 4	Freshwater Refinement Screening Value	Not specified	1.773

Benchmark Values for Cresol, o- in Sediment (Fresh Water)

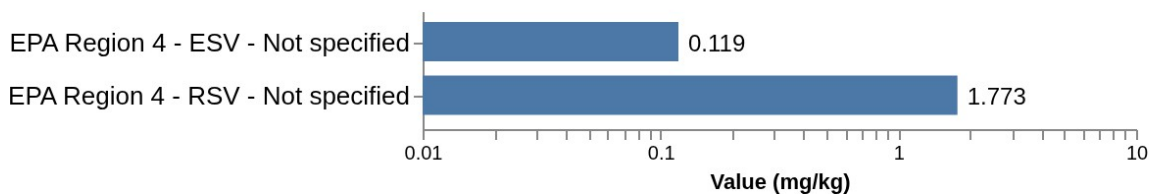


Table 71: Benchmark Values for Cresol, p- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
106-44-5	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.670	
106-44-5	EPA Region 4	Sediment ESV	Not specified	0.093	
106-44-5	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.260	28
106-44-5	EPA Region 6	Sediment Freshwater	Not specified	0.260	
106-44-5	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	1.130	
106-44-5	EPA Region 6	Sediment Freshwater Second Effects	Not specified	2.000	
106-44-5	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.260	
106-44-5	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	2.000	

Benchmark Values for Cresol, p- in Sediment (Fresh Water)

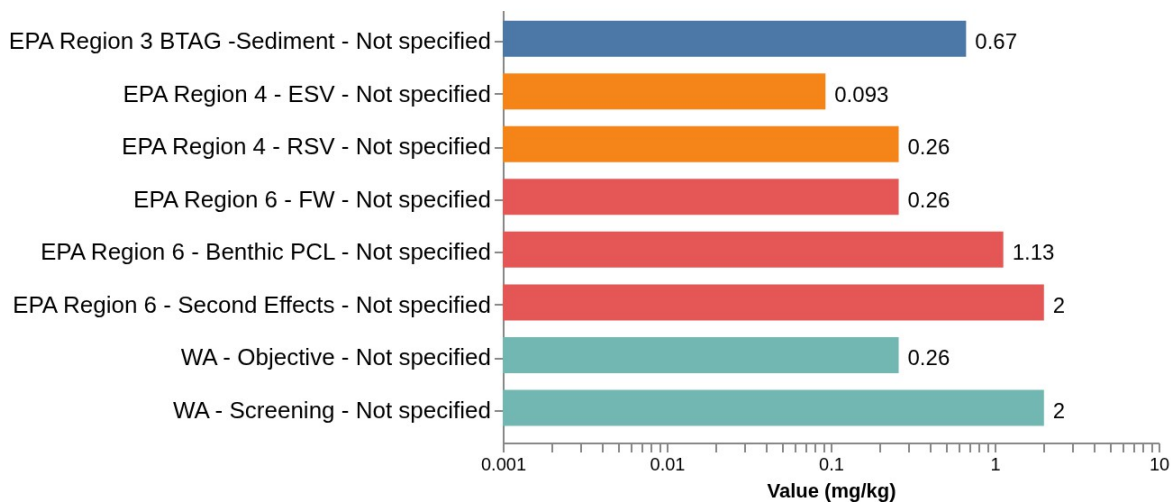
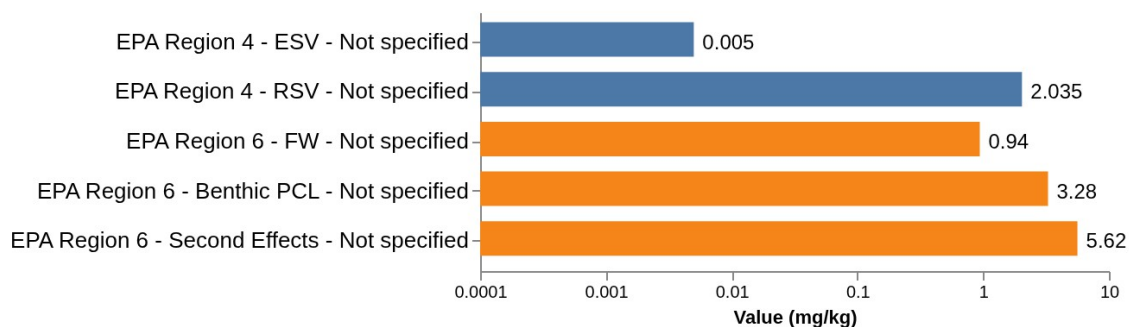


Table 72: Benchmark Values for Cresol, p-chloro-m- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
59-50-7	EPA Region 4	Sediment ESV	Not specified	0.005
59-50-7	EPA Region 4	Freshwater Refinement Screening Value	Not specified	2.035
59-50-7	EPA Region 6	Sediment Freshwater	Not specified	0.940
59-50-7	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	3.280
59-50-7	EPA Region 6	Sediment Freshwater Second Effects	Not specified	5.620

Benchmark Values for Cresol, p-chloro-m- in Sediment (Fresh Water)**Table 73: Benchmark Values for Cumene in Sediment (Fresh Water)**

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
98-82-8	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.086	
98-82-8	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.035	
98-82-8	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.713	
98-82-8	EPA Region 6	Sediment Freshwater	Not specified	8.990	
98-82-8	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	31.470	
98-82-8	EPA Region 6	Sediment Freshwater Second Effects	Not specified	53.950	
98-82-8	New York DEC	Freshwater Sediment Class A	Not specified	0.210	23
98-82-8	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.210	
98-82-8	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	1.800	
98-82-8	New York DEC	Freshwater Sediment Class C	Not specified	1.800	22

Benchmark Values for Cumene in Sediment (Fresh Water)

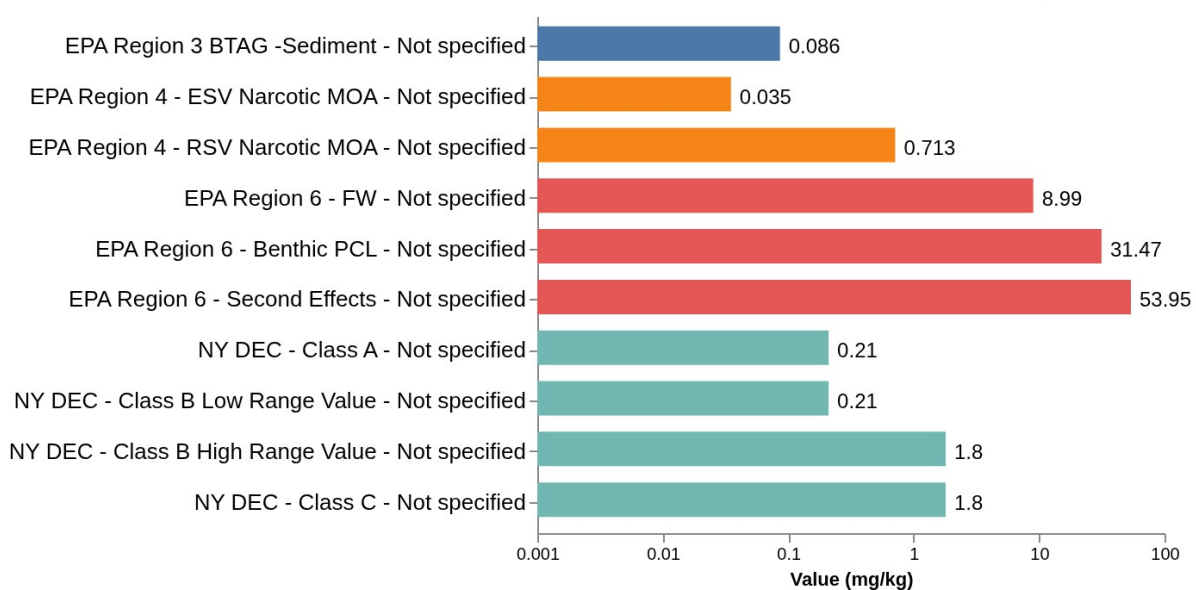


Table 74: Benchmark Values for Cyanazine in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
21725-46-2	EPA Region 4	Sediment ESV	Not specified	0.030
21725-46-2	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.117

Benchmark Values for Cyanazine in Sediment (Fresh Water)

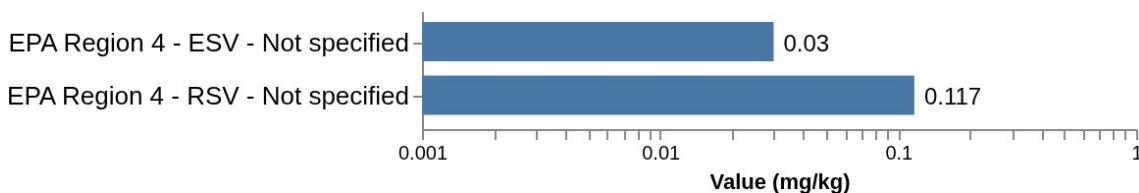


Table 75: Benchmark Values for Cyanide (CN-) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
57-12-5	EPA Region 3	BTAG - Freshwater Sediment	Not specified	0.1

Benchmark Values for Cyanide (CN-) in Sediment (Fresh Water)



Table 76: Benchmark Values for Cyclohexane in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
110-82-7	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.278

Benchmark Values for Cyclohexane in Sediment (Fresh Water)

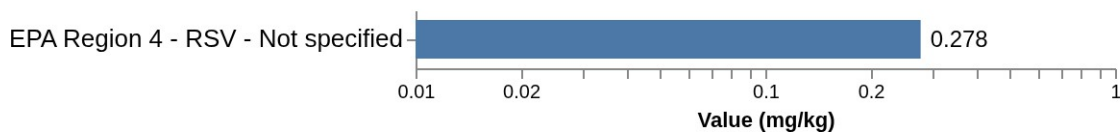


Table 77: Benchmark Values for DDD, Total in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
000000-17-1	EPA Region 4	Sediment ESV	Not specified	0.0049	6, 10
000000-17-1	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.0280	6, 10
000000-17-1	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.3100	
000000-17-1	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	0.8600	

Benchmark Values for DDD, Total in Sediment (Fresh Water)

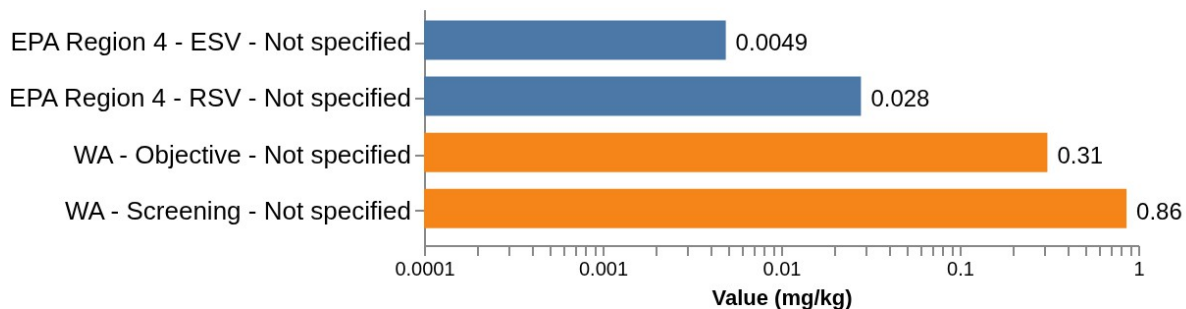


Table 78: Benchmark Values for DDE, Total in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
000000-17-2	EPA Region 4	Sediment ESV	Not specified	0.0032	6, 10
000000-17-2	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.0310	6, 10
000000-17-2	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.0210	
000000-17-2	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	0.0330	

Benchmark Values for DDE, Total in Sediment (Fresh Water)

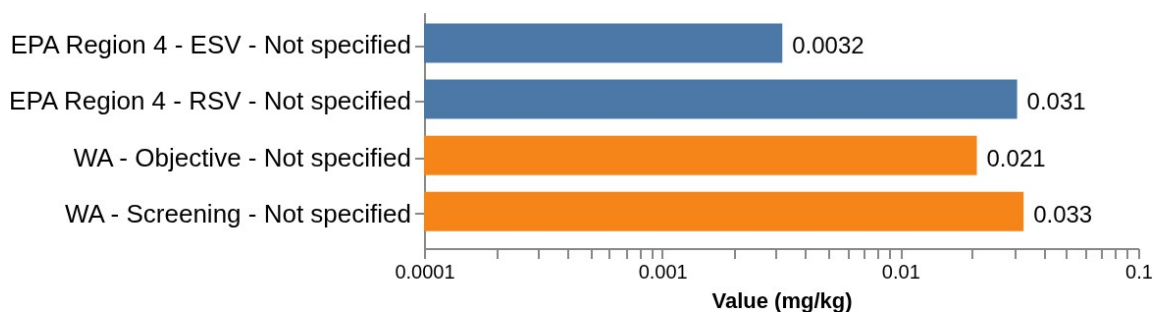


Table 79: Benchmark Values for DDT, o,p'- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
789-02-6	Canada	Sediment Freshwater ISQG	Not specified	0.00119
789-02-6	Canada	Sediment Freshwater PEL	Not specified	0.00477

Benchmark Values for DDT, o,p'- in Sediment (Fresh Water)

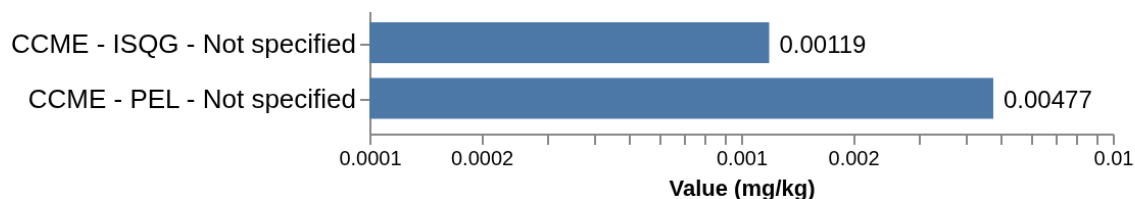


Table 80: Benchmark Values for DDT, Total in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
000000-07-7	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.00416	
000000-07-7	EPA Region 4	Sediment ESV	Not specified	0.00420	6, 10
000000-07-7	EPA Region 4	Sediment ESV	Wildlife	0.01000	8, 10
000000-07-7	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.06300	6, 10
000000-07-7	EPA Region 6	Sediment Freshwater	Not specified	0.00528	
000000-07-7	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.29000	
000000-07-7	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.57200	17
000000-07-7	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.04400	
000000-07-7	New York DEC	Freshwater Sediment Class A	Not specified	0.04400	23
000000-07-7	New York DEC	Freshwater Sediment Class C	Not specified	48.00000	22
000000-07-7	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	48.00000	
000000-07-7	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.10000	
000000-07-7	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	8.10000	

Benchmark Values for DDT, Total in Sediment (Fresh Water)

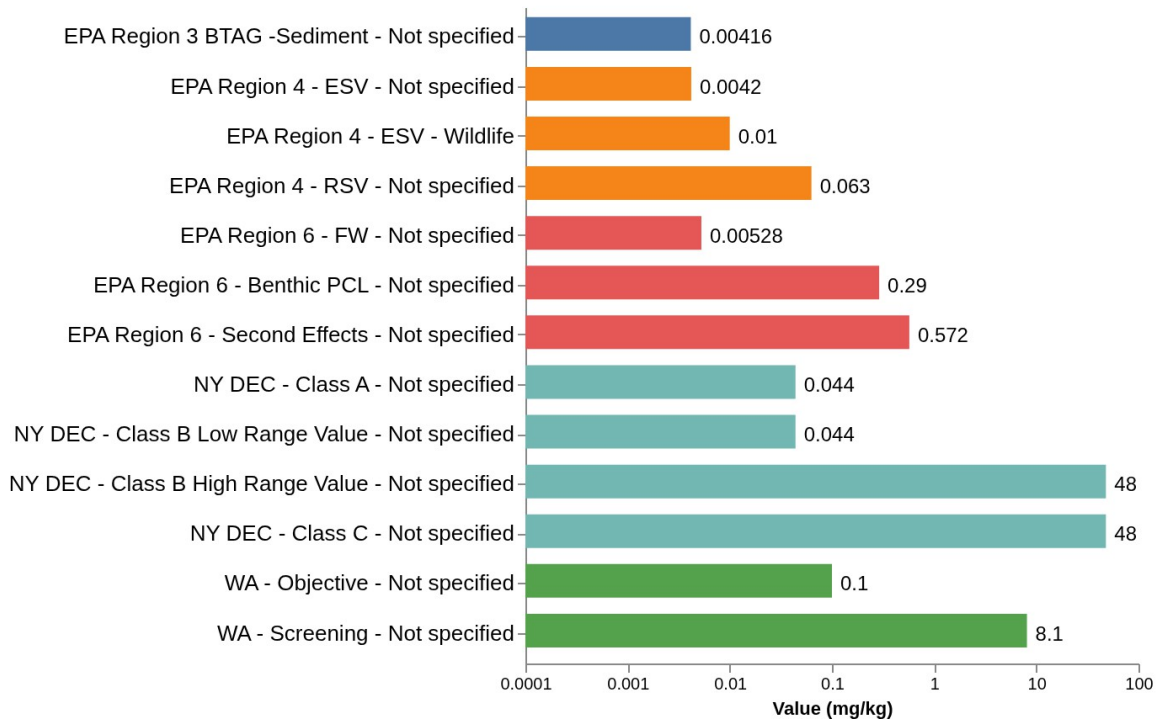


Table 81: Benchmark Values for DDT/DDE/DDD (total) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
000000-05-1	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.00528	
000000-05-1	EPA Region 4	Sediment ESV	Not specified	0.00530	6, 10
000000-05-1	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.57200	6, 10
000000-05-1	Florida	Freshwater ERL	Not specified	0.00300	
000000-05-1	Florida	Freshwater TEL	Not specified	0.00700	
000000-05-1	Florida	Freshwater LEL	Not specified	0.00700	
000000-05-1	Florida	Freshwater SEL	Not specified	0.12000	
000000-05-1	Florida	Freshwater ERM	Not specified	0.35000	
000000-05-1	Florida	Freshwater PEL	Not specified	4.45000	

Benchmark Values for DDT/DDE/DDD (total) in Sediment (Fresh Water)

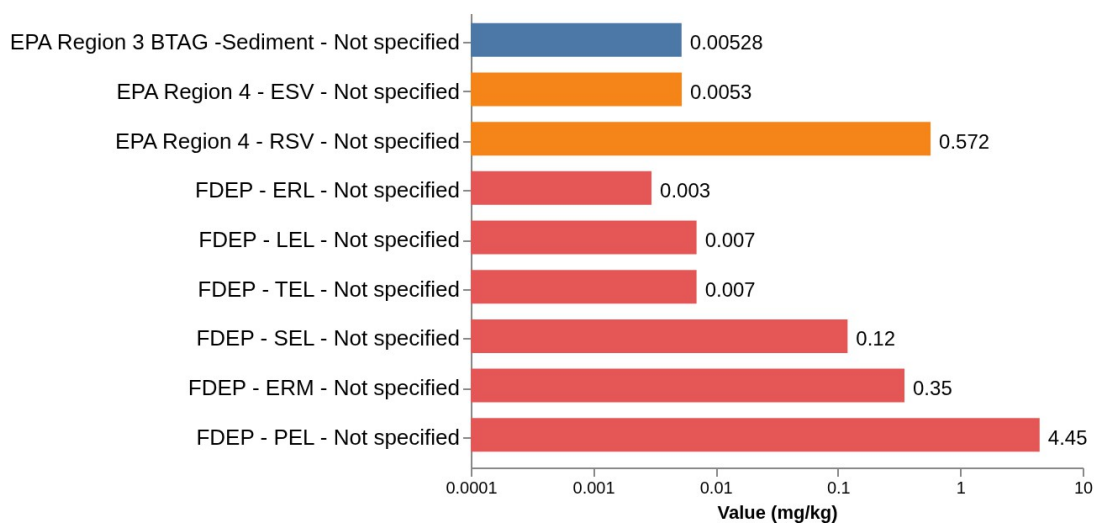


Table 82: Benchmark Values for Decane in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
124-18-5	EPA Region 4	Sediment ESV	Not specified	0.726

Benchmark Values for Decane in Sediment (Fresh Water)

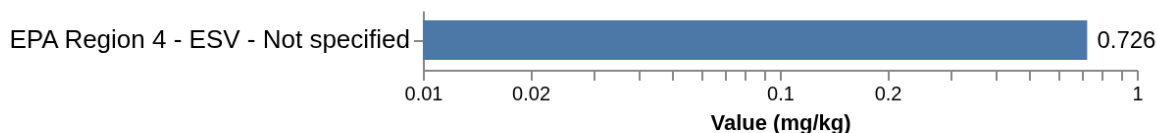


Table 83: Benchmark Values for Demeton, S in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
126-75-0	EPA Region 4	Sediment ESV	Not specified	0.00020
126-75-0	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.00035

Benchmark Values for Demeton, S in Sediment (Fresh Water)

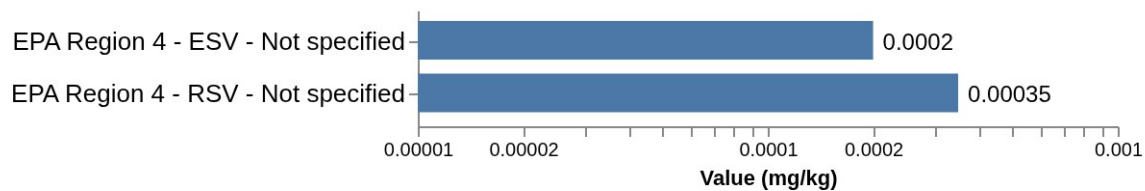


Table 84: Benchmark Values for Diazinon in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
333-41-5	ECC Canada	Freshwater LTC Sediment	Not specified	0.00240	
333-41-5	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.00239	
333-41-5	EPA Region 4	Sediment ESV	Not specified	0.00040	
333-41-5	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.00900	28
333-41-5	EPA Region 6	Sediment Freshwater	Not specified	0.00190	
333-41-5	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.00500	
333-41-5	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.00730	
333-41-5	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.00900	
333-41-5	New York DEC	Freshwater Sediment Class A	Not specified	0.00900	23
333-41-5	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	0.01900	
333-41-5	New York DEC	Freshwater Sediment Class C	Not specified	0.01900	22

Benchmark Values for Diazinon in Sediment (Fresh Water)

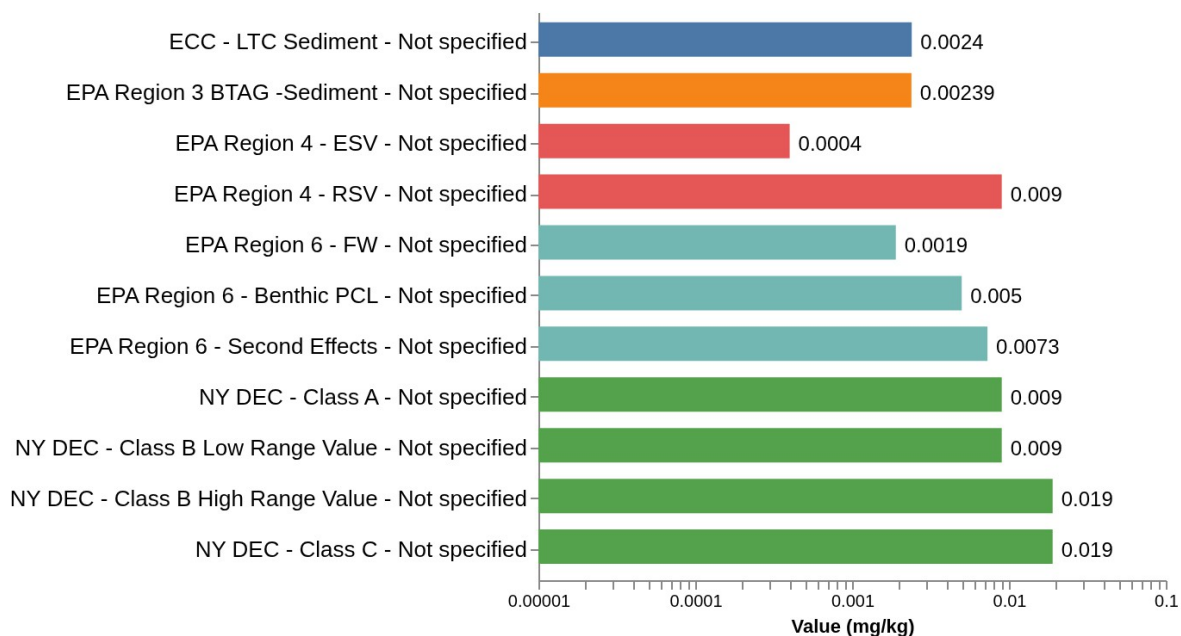


Table 85: Benchmark Values for Dibenz[a,h]anthracene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
53-70-3	Canada	Sediment Freshwater ISQG	Not specified	0.00622	
53-70-3	Canada	Sediment Freshwater PEL	Not specified	0.13500	
53-70-3	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.03300	
53-70-3	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.03300	7, 28
53-70-3	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	11.20000	7
53-70-3	EPA Region 6	Sediment Freshwater	Not specified	0.03300	
53-70-3	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.08000	
53-70-3	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.13500	
53-70-3	Florida	Freshwater LEL	Not specified	0.06000	
53-70-3	Florida	Freshwater ERL	Not specified	0.06000	

Benchmark Values for Dibenz[a,h]anthracene in Sediment (Fresh Water)

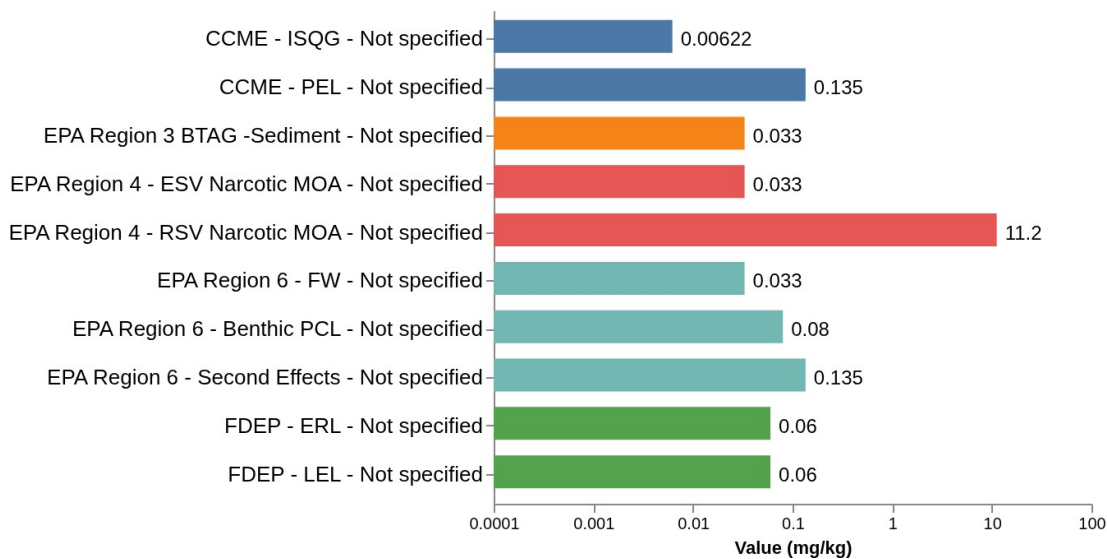


Table 86: Benchmark Values for Dibenzofuran in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
132-64-9	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.415	28
132-64-9	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.510	
132-64-9	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	2.313	
132-64-9	EPA Region 6	Sediment Freshwater	Not specified	0.200	
132-64-9	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.440	
132-64-9	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.680	
132-64-9	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.200	
132-64-9	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	0.680	

Benchmark Values for Dibenzofuran in Sediment (Fresh Water)

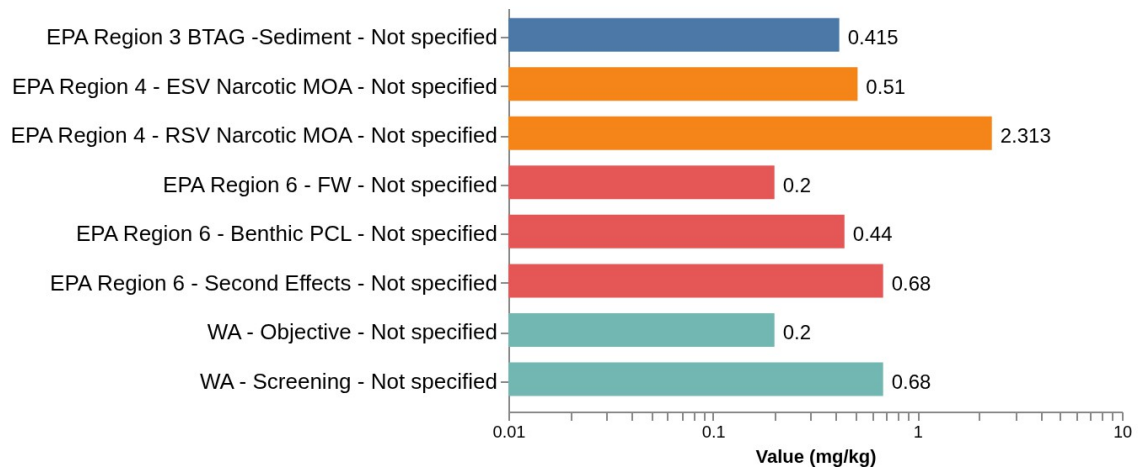


Table 87: Benchmark Values for Dibromo-3-nitrilopropionamide, 2,2- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
10222-01-2	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.0071	

Benchmark Values for Dibromo-3-nitrilopropionamide, 2,2- in Sediment (Fresh Water)

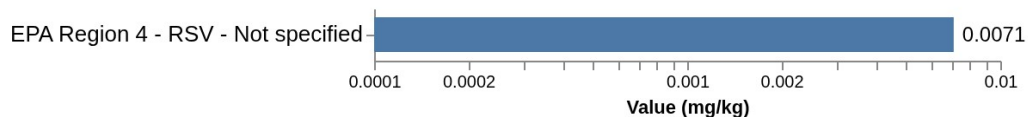


Table 88: Benchmark Values for Dibromochloromethane in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
124-48-1	EPA Region 4	Sediment ESV	Not specified	0.198
124-48-1	EPA Region 6	Sediment Freshwater	Not specified	0.160
124-48-1	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.550
124-48-1	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.940

Benchmark Values for Dibromochloromethane in Sediment (Fresh Water)

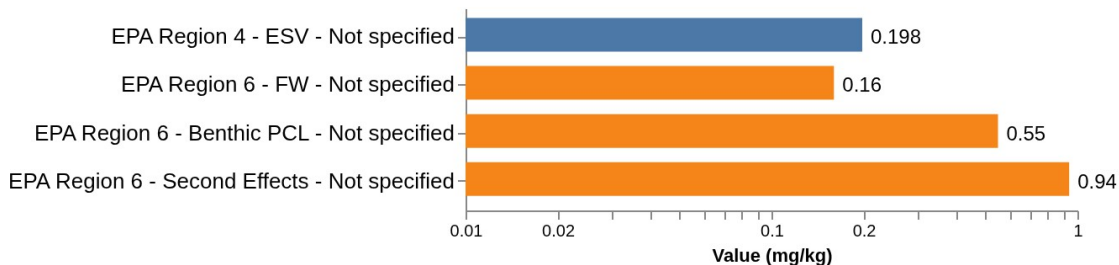


Table 89: Benchmark Values for Dibutyl Phthalate in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
84-74-2	EPA Region 3	BTAG – Freshwater Sediment	Not specified	6.470	
84-74-2	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.011	28
84-74-2	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.319	
84-74-2	EPA Region 6	Sediment Freshwater	Not specified	11.000	
84-74-2	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	45.500	
84-74-2	EPA Region 6	Sediment Freshwater Second Effects	Not specified	80.000	
84-74-2	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.380	
84-74-2	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	1.000	

Benchmark Values for Dibutyl Phthalate in Sediment (Fresh Water)

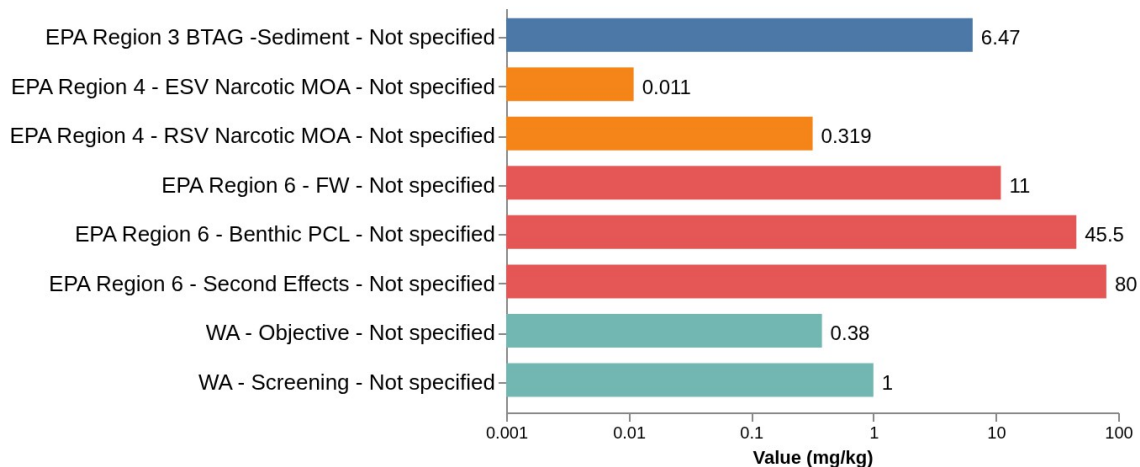


Table 90: Benchmark Values for Dibutyltin Compounds in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
000000-01-5	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.91
000000-01-5	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	130.00

Benchmark Values for Dibutyltin Compounds in Sediment (Fresh Water)

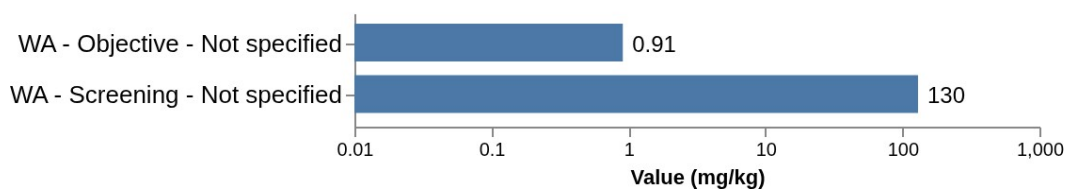


Table 91: Benchmark Values for Dibutyltin oxide in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
818-08-6	EPA Region 4	Sediment ESV	Not specified	0.91
818-08-6	EPA Region 4	Freshwater Refinement Screening Value	Not specified	130.00

Benchmark Values for Dibutyltin oxide in Sediment (Fresh Water)

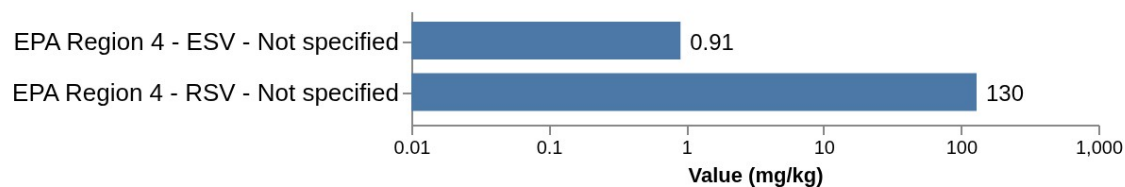


Table 92: Benchmark Values for Dicamba in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
1918-00-9	EPA Region 4	Sediment ESV	Not specified	0.0084	
1918-00-9	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.1800	28
1918-00-9	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.1800	
1918-00-9	New York DEC	Freshwater Sediment Class A	Not specified	0.1800	23
1918-00-9	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	13.0000	
1918-00-9	New York DEC	Freshwater Sediment Class C	Not specified	13.0000	22

Benchmark Values for Dicamba in Sediment (Fresh Water)

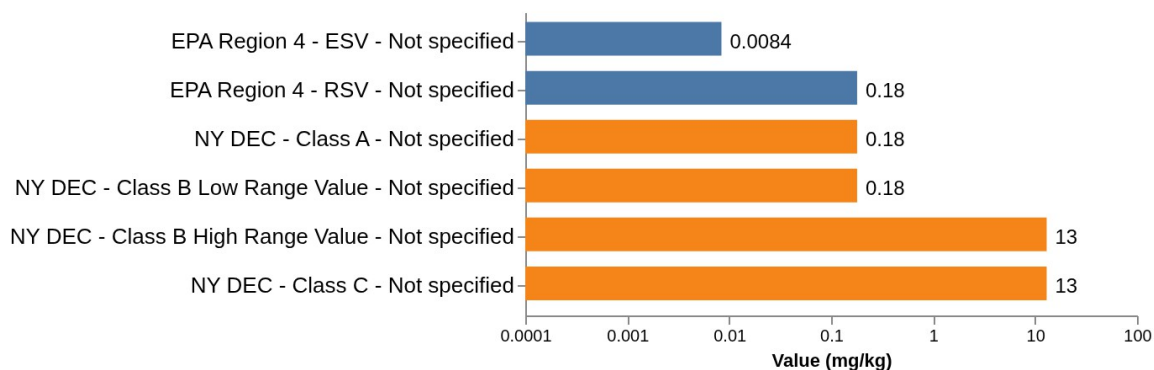


Table 93: Benchmark Values for Dichloroaniline, 2,4- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
554-00-7	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.032

Benchmark Values for Dichloroaniline, 2,4- in Sediment (Fresh Water)

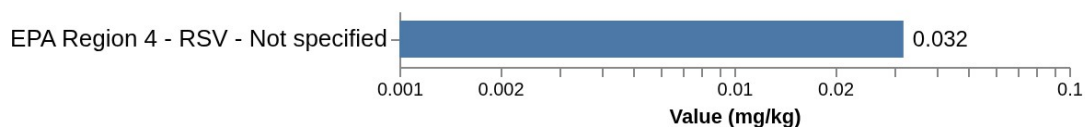


Table 94: Benchmark Values for Dichlorobenzene, 1,2- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
95-50-1	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0165	
95-50-1	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.0950	
95-50-1	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.4770	
95-50-1	EPA Region 6	Sediment Freshwater	Not specified	0.8300	
95-50-1	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	2.8900	
95-50-1	EPA Region 6	Sediment Freshwater Second Effects	Not specified	4.9500	
95-50-1	New York DEC	Freshwater Sediment Class A	Not specified	0.2800	23
95-50-1	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.2800	
95-50-1	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	2.5000	
95-50-1	New York DEC	Freshwater Sediment Class C	Not specified	2.5000	22

Benchmark Values for Dichlorobenzene, 1,2- in Sediment (Fresh Water)

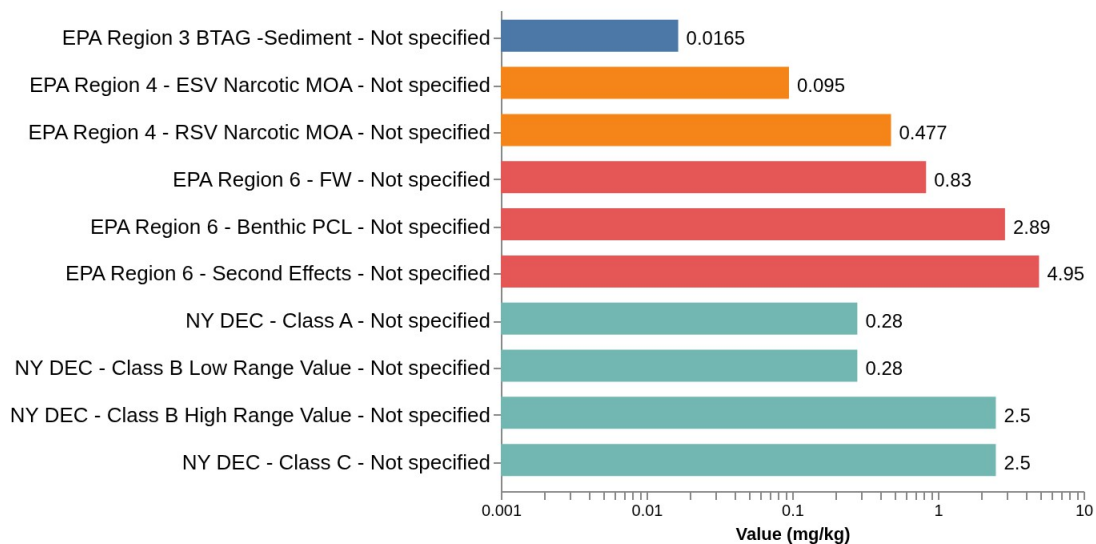


Table 95: Benchmark Values for Dichlorobenzene, 1,3- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
541-73-1	EPA Region 3	BTAG – Freshwater Sediment	Not specified	4.430	
541-73-1	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.089	
541-73-1	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.468	
541-73-1	EPA Region 6	Sediment Freshwater	Not specified	0.190	
541-73-1	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.270	
541-73-1	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.350	
541-73-1	New York DEC	Freshwater Sediment Class A	Not specified	1.800	23
541-73-1	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	1.800	
541-73-1	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	7.100	
541-73-1	New York DEC	Freshwater Sediment Class C	Not specified	7.100	22

Benchmark Values for Dichlorobenzene, 1,3- in Sediment (Fresh Water)

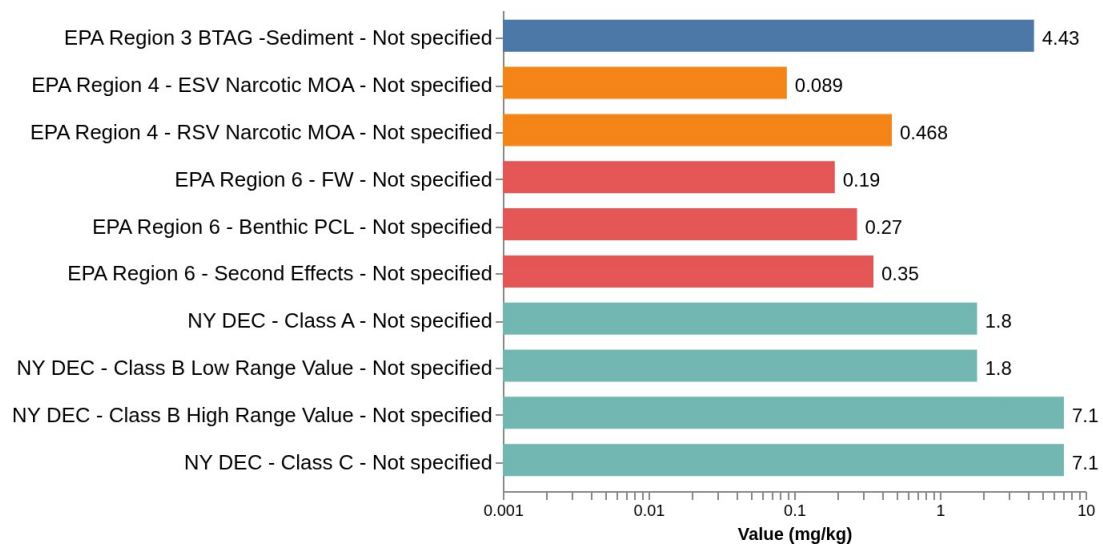


Table 96: Benchmark Values for Dichlorobenzene, 1,4- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
106-46-7	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.599	28
106-46-7	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.030	
106-46-7	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.468	
106-46-7	EPA Region 6	Sediment Freshwater	Not specified	0.770	
106-46-7	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	2.710	
106-46-7	EPA Region 6	Sediment Freshwater Second Effects	Not specified	4.650	
106-46-7	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.720	23
106-46-7	New York DEC	Freshwater Sediment Class A	Not specified	0.720	
106-46-7	New York DEC	Freshwater Sediment Class C	Not specified	3.300	
106-46-7	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	3.300	22

Benchmark Values for Dichlorobenzene, 1,4- in Sediment (Fresh Water)

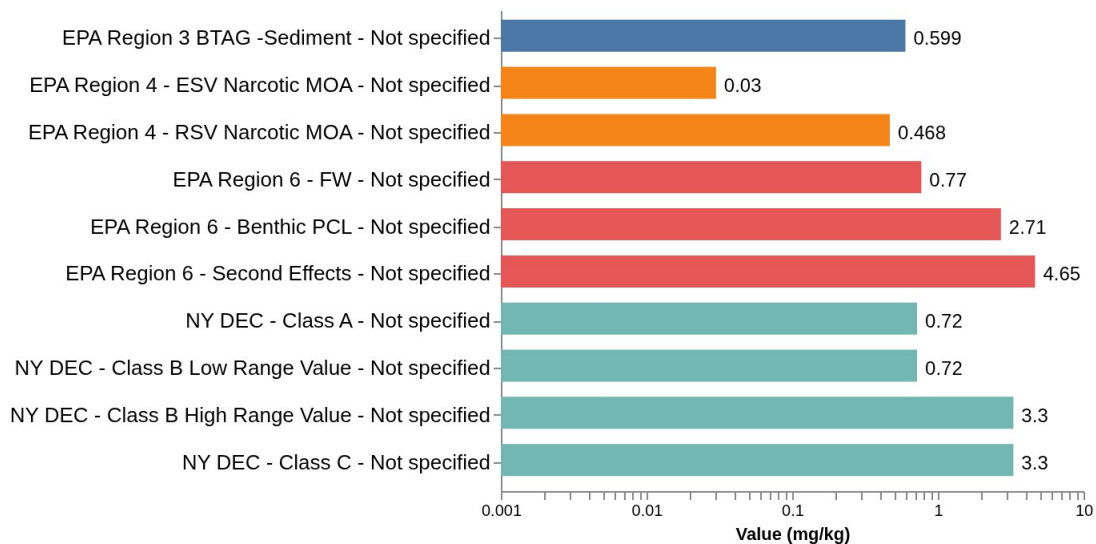


Table 97: Benchmark Values for Dichlorobenzidine, 3,3'– in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
91–94–1	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.127
91–94–1	EPA Region 4	Sediment ESV	Not specified	0.031
91–94–1	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.090

Benchmark Values for Dichlorobenzidine, 3,3'- in Sediment (Fresh Water)

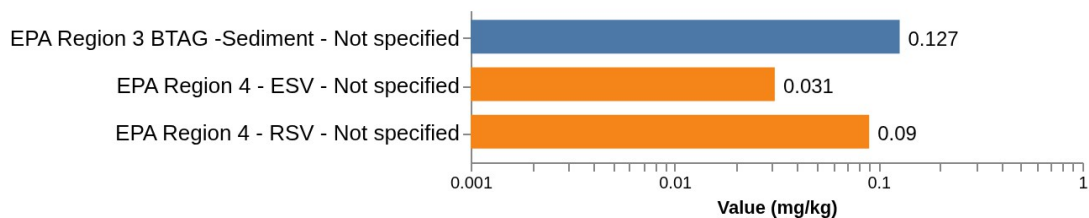


Table 98: Benchmark Values for Dichlorodifluoromethane in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
75–71–8	EPA Region 6	Sediment Freshwater	Not specified	3.68
75–71–8	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	12.89
75–71–8	EPA Region 6	Sediment Freshwater Second Effects	Not specified	22.09

Benchmark Values for Dichlorodifluoromethane in Sediment (Fresh Water)

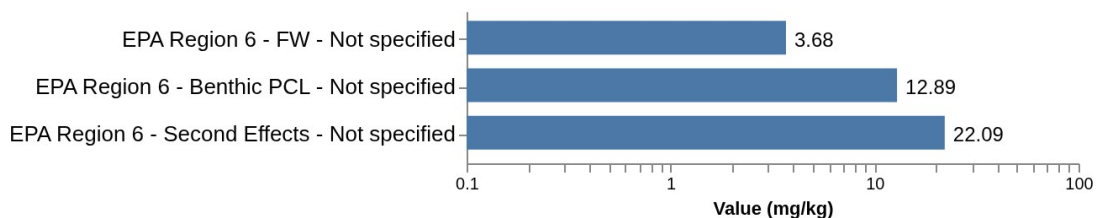


Table 99: Benchmark Values for Dichlorodiphenyldichloroethane, p,p'- (DDD) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
72-54-8	Canada	Sediment Freshwater ISQG	Not specified	0.00354	
72-54-8	Canada	Sediment Freshwater PEL	Not specified	0.00851	
72-54-8	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.00488	
72-54-8	EPA Region 4	Sediment ESV	Aquatic and wildlife	0.00350	7
72-54-8	EPA Region 4	Freshwater Refinement Screening Value	Aquatic and wildlife	0.00850	7
72-54-8	EPA Region 6	Sediment Freshwater	Not specified	0.00488	
72-54-8	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.02000	
72-54-8	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.02800	17
72-54-8	Florida	Freshwater ERL	Not specified	0.00200	
72-54-8	Florida	Freshwater TEL	Not specified	0.00354	
72-54-8	Florida	Freshwater LEL	Not specified	0.00800	
72-54-8	Florida	Freshwater PEL	Not specified	0.00851	
72-54-8	Florida	Freshwater MET	Not specified	0.01000	
72-54-8	Florida	Freshwater ERM	Not specified	0.02000	
72-54-8	Florida	Freshwater SEL	Not specified	0.06000	
72-54-8	Florida	Freshwater TET	Not specified	0.06000	

Benchmark Values for Dichlorodiphenyldichloroethane, p,p'- (DDD) in Sediment (Fresh Water)

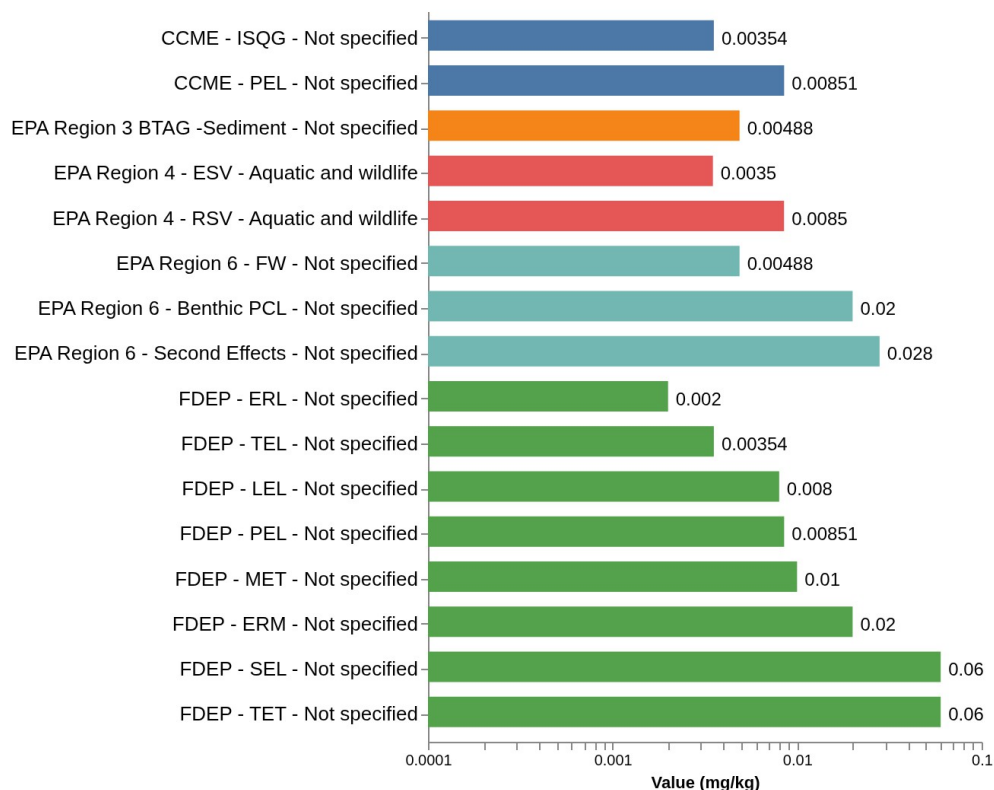


Table 100: Benchmark Values for Dichlorodiphenyldichloroethylene, p,p'– (DDE) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
72–55–9	Canada	Sediment Freshwater ISQG	Not specified	0.00142	
72–55–9	Canada	Sediment Freshwater PEL	Not specified	0.00675	
72–55–9	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.00316	
72–55–9	EPA Region 4	Sediment ESV	Aquatic and wildlife	0.00140	7
72–55–9	EPA Region 4	Freshwater Refinement Screening Value	Aquatic and wildlife	0.00680	7
72–55–9	EPA Region 6	Sediment Freshwater	Not specified	0.00316	
72–55–9	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.02000	
72–55–9	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.03130	17
72–55–9	Florida	Freshwater TEL	Not specified	0.00142	
72–55–9	Florida	Freshwater ERL	Not specified	0.00200	
72–55–9	Florida	Freshwater LEL	Not specified	0.00500	
72–55–9	Florida	Freshwater PEL	Not specified	0.00675	
72–55–9	Florida	Freshwater MET	Not specified	0.00700	
72–55–9	Florida	Freshwater ERM	Not specified	0.01500	
72–55–9	Florida	Freshwater TET	Not specified	0.05000	
72–55–9	Florida	Freshwater SEL	Not specified	0.19000	

Benchmark Values for Dichlorodiphenyldichloroethylene, p,p'– (DDE) in Sediment (Fresh Water)

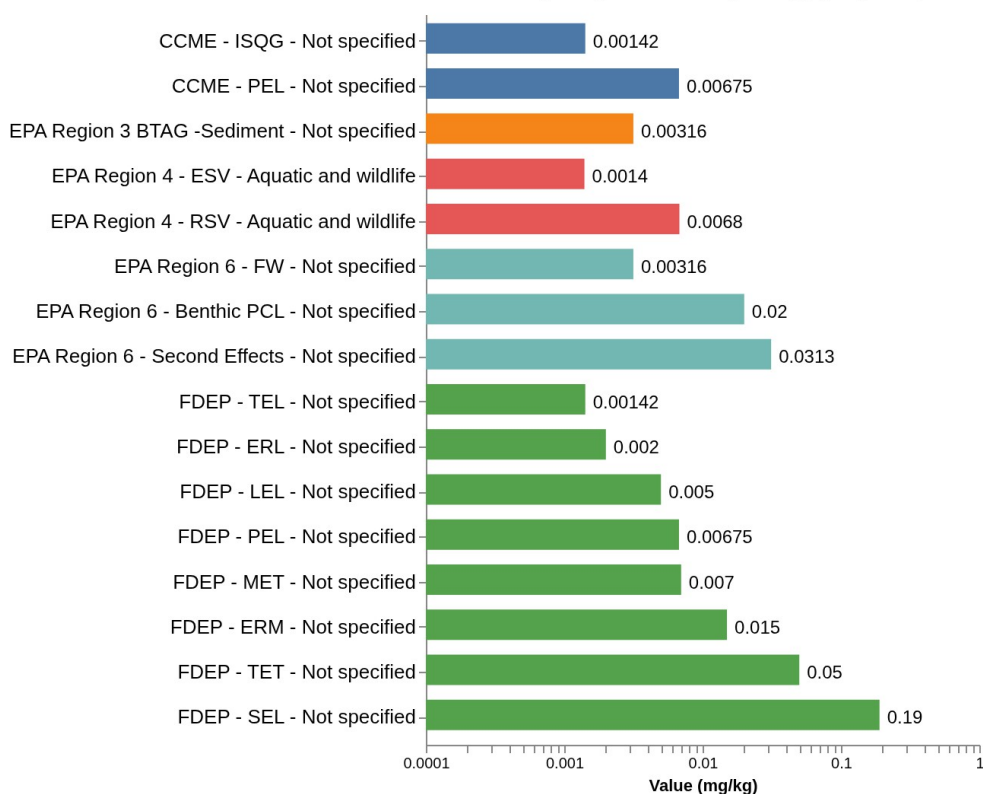


Table 101: Benchmark Values for Dichlorodiphenyltrichloroethane, p,p'- (DDT) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
50-29-3	EPA Region 4	Sediment ESV	Aquatic only	0.00100	7, 28
50-29-3	EPA Region 4	Freshwater Refinement Screening Value	Aquatic only	0.00700	7, 28
50-29-3	EPA Region 6	Sediment Freshwater	Not specified	0.00416	
50-29-3	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.03000	
50-29-3	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.06290	17
50-29-3	Florida	Freshwater ERL	Not specified	0.00100	
50-29-3	Florida	Freshwater ERM	Not specified	0.00700	
50-29-3	Florida	Freshwater LEL	Not specified	0.00800	
50-29-3	Florida	Freshwater MET	Not specified	0.00900	
50-29-3	Florida	Freshwater TET	Not specified	0.05000	
50-29-3	Florida	Freshwater SEL	Not specified	0.71000	

Benchmark Values for Dichlorodiphenyltrichloroethane, p,p'- (DDT) in Sediment (Fresh Water)

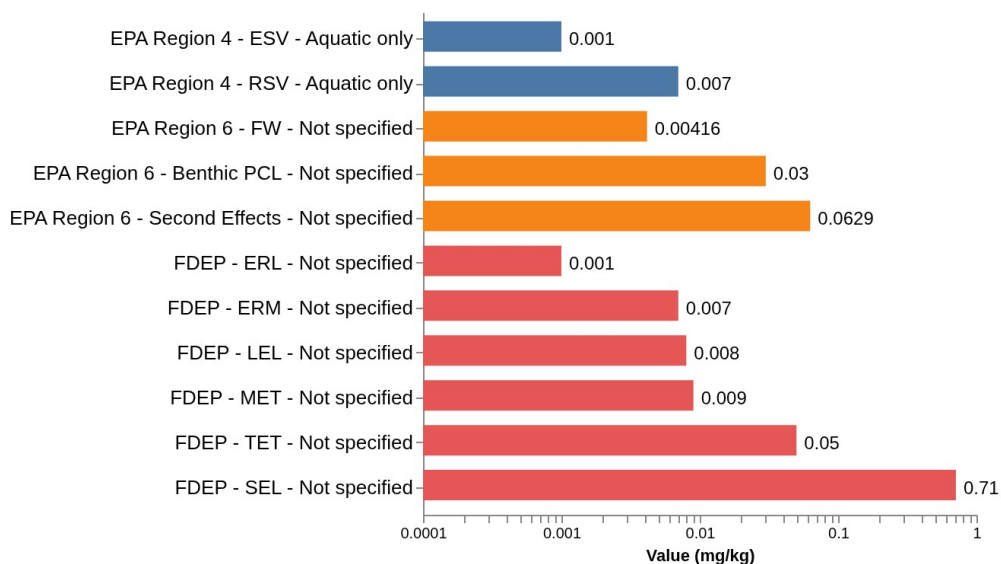


Table 102: Benchmark Values for Dichloroethane, 1,1- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
75-34-3	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.020	28
75-34-3	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	1.666	
75-34-3	EPA Region 6	Sediment Freshwater	Not specified	2.320	
75-34-3	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	8.110	
75-34-3	EPA Region 6	Sediment Freshwater Second Effects	Not specified	13.890	

Benchmark Values for Dichloroethane, 1,1- in Sediment (Fresh Water)

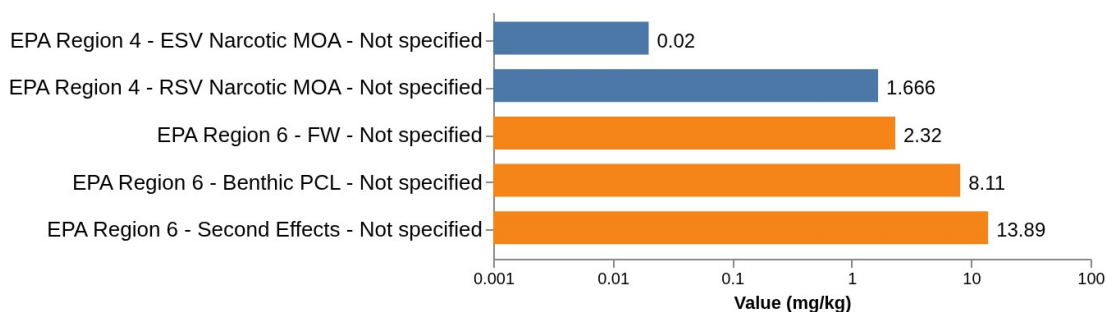


Table 103: Benchmark Values for Dichloroethane, 1,2- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
107-06-2	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.986
107-06-2	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	1.131
107-06-2	EPA Region 6	Sediment Freshwater	Not specified	9.560
107-06-2	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	19.120
107-06-2	EPA Region 6	Sediment Freshwater Second Effects	Not specified	28.680

Benchmark Values for Dichloroethane, 1,2- in Sediment (Fresh Water)

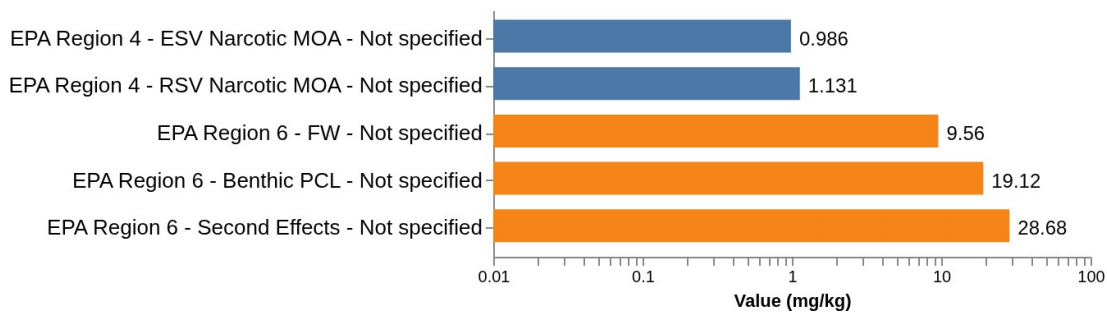


Table 104: Benchmark Values for Dichloroethylene, 1,1- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
75-35-4	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.031	
75-35-4	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.100	28
75-35-4	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.753	
75-35-4	EPA Region 6	Sediment Freshwater	Not specified	3.740	
75-35-4	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	7.470	
75-35-4	EPA Region 6	Sediment Freshwater Second Effects	Not specified	11.200	
75-35-4	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.520	
75-35-4	New York DEC	Freshwater Sediment Class A	Not specified	0.520	23
75-35-4	New York DEC	Freshwater Sediment Class C	Not specified	4.700	22
75-35-4	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	4.700	

Benchmark Values for Dichloroethylene, 1,1- in Sediment (Fresh Water)

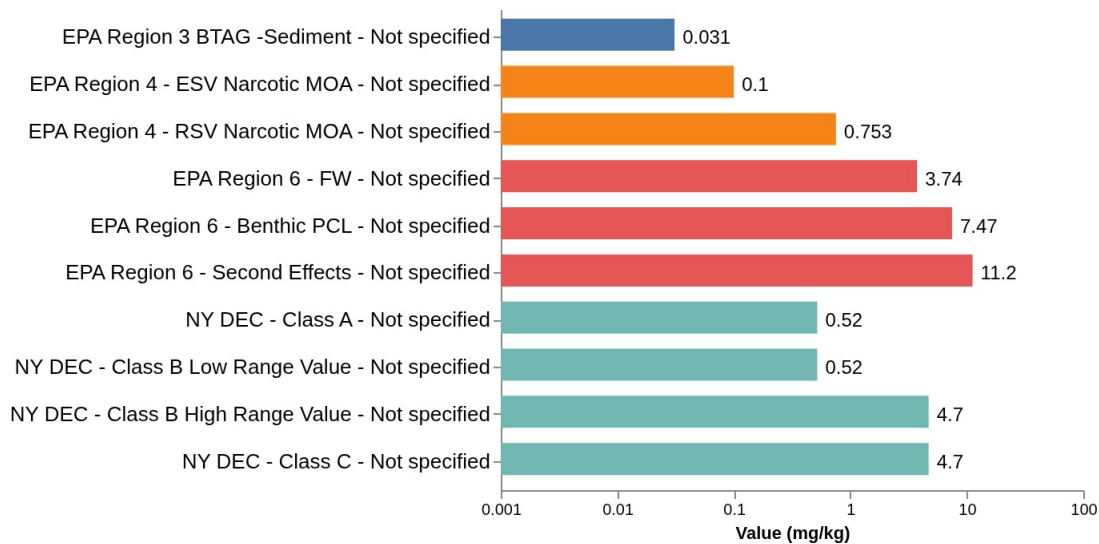


Table 105: Benchmark Values for Dichloroethylene, 1,2- (Mixed Isomers) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
540-59-0	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.200	28
540-59-0	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	1.135	
540-59-0	EPA Region 6	Sediment Freshwater	Not specified	12.280	
540-59-0	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	24.570	
540-59-0	EPA Region 6	Sediment Freshwater Second Effects	Not specified	36.850	

Benchmark Values for Dichloroethylene, 1,2- (Mixed Isomers) in Sediment (Fresh Water)

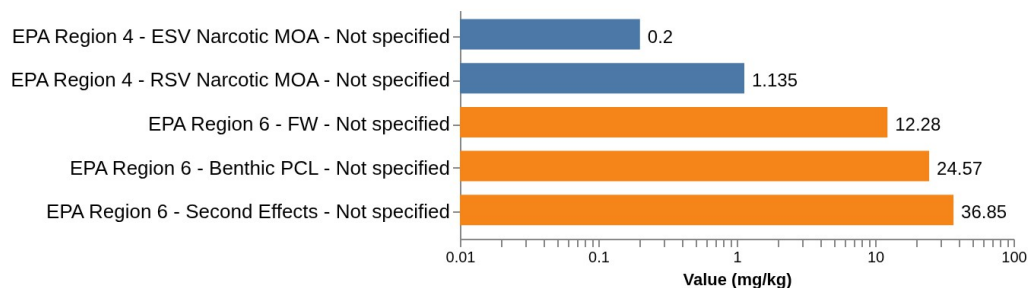


Table 106: Benchmark Values for Dichloroethylene, cis-1,2- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
156-59-2	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.432
156-59-2	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	1.135

Benchmark Values for Dichloroethylene, cis-1,2- in Sediment (Fresh Water)

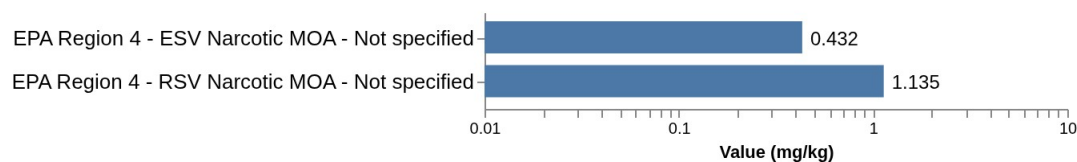


Table 107: Benchmark Values for Dichloroethylene, trans-1,2- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
156-60-5	EPA Region 3	BTAG – Freshwater Sediment	Not specified	1.050	
156-60-5	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.389	
156-60-5	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	1.135	
156-60-5	EPA Region 6	Sediment Freshwater	Not specified	23.950	
156-60-5	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	47.900	
156-60-5	EPA Region 6	Sediment Freshwater Second Effects	Not specified	71.840	
156-60-5	New York DEC	Freshwater Sediment Class A	Not specified	1.200	23
156-60-5	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	1.200	
156-60-5	New York DEC	Freshwater Sediment Class C	Not specified	11.000	22
156-60-5	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	11.000	

Benchmark Values for Dichloroethylene, trans-1,2- in Sediment (Fresh Water)

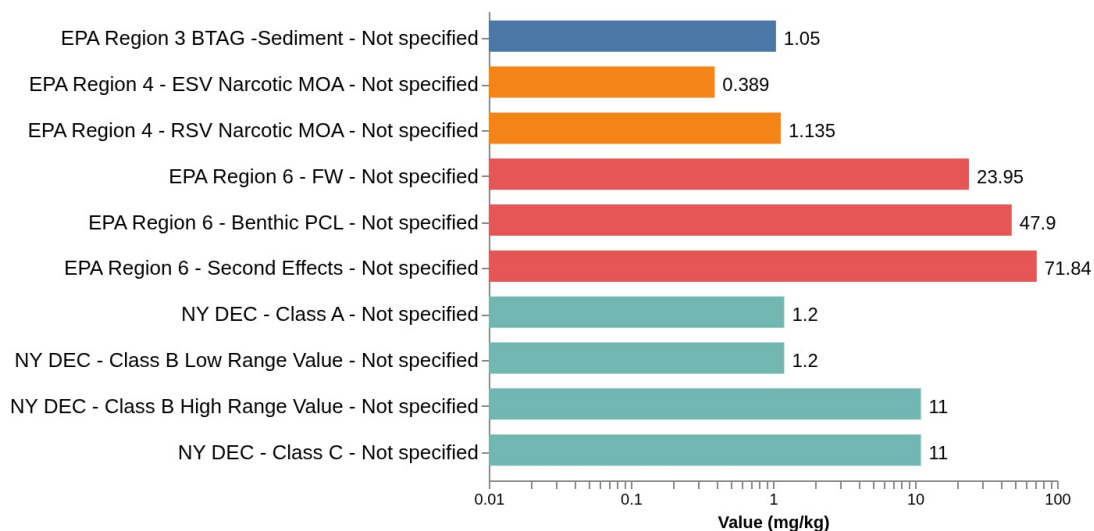


Table 108: Benchmark Values for Dichlorophenol, 2,4- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
120-83-2	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.117
120-83-2	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.057
120-83-2	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	1.886

Benchmark Values for Dichlorophenol, 2,4- in Sediment (Fresh Water)

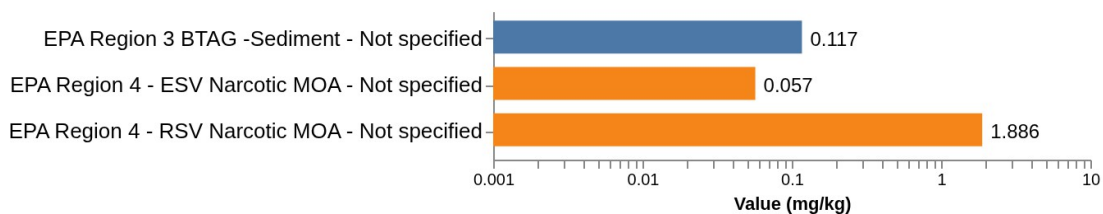


Table 109: Benchmark Values for Dichlorophenoxy Acetic Acid, 2,4- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
94-75-7	EPA Region 4	Sediment ESV	Not specified	0.047
94-75-7	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.436

Benchmark Values for Dichlorophenoxy Acetic Acid, 2,4- in Sediment (Fresh Water)

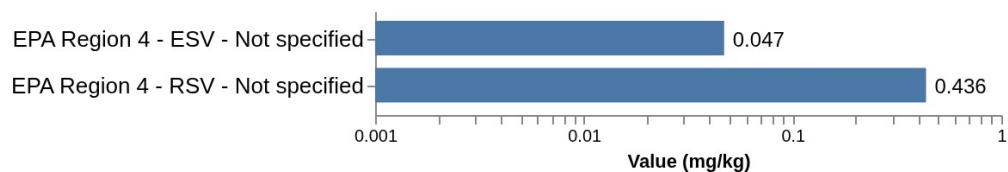


Table 110: Benchmark Values for Dichloropropane, 1,2- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
78-87-5	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.428
78-87-5	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.876
78-87-5	EPA Region 6	Sediment Freshwater	Not specified	7.050
78-87-5	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	14.090
78-87-5	EPA Region 6	Sediment Freshwater Second Effects	Not specified	21.120

Benchmark Values for Dichloropropane, 1,2- in Sediment (Fresh Water)

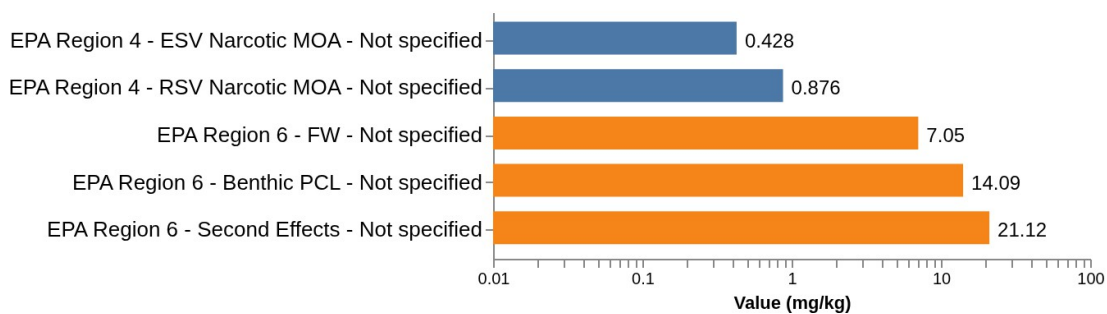


Table 111: Benchmark Values for Dichloropropene, 1,3- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
542-75-6	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.000051
542-75-6	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.001500
542-75-6	EPA Region 4	Sediment ESV	Not specified	0.001500
542-75-6	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.075000
542-75-6	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.075000
542-75-6	EPA Region 6	Sediment Freshwater	Not specified	0.230000
542-75-6	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.800000
542-75-6	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1.370000

Benchmark Values for Dichloropropene, 1,3- in Sediment (Fresh Water)

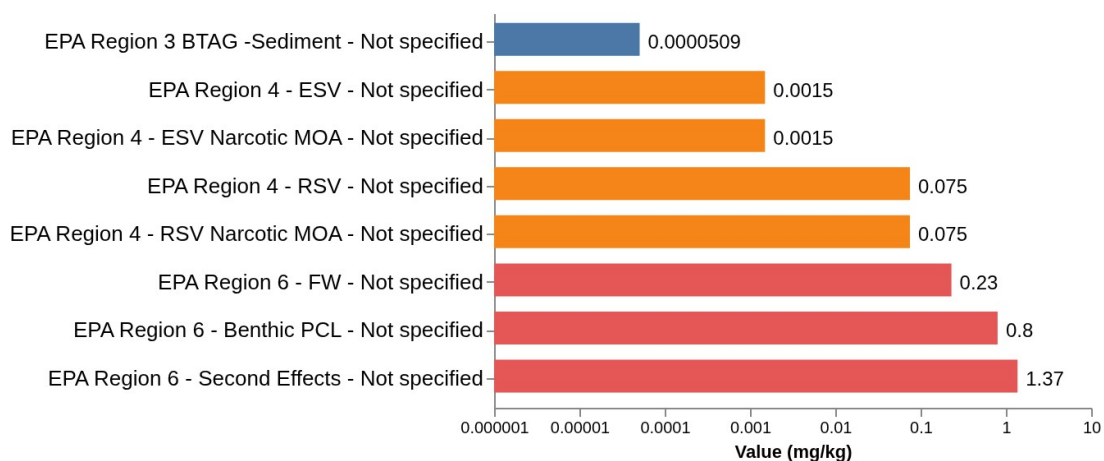


Table 112: Benchmark Values for Dieldrin in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
60-57-1	Canada	Sediment Freshwater ISQG	Not specified	0.00285	
60-57-1	Canada	Sediment Freshwater PEL	Not specified	0.00667	
60-57-1	EPA OSWER	Freshwater SQC	Not specified	0.05200	
60-57-1	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.00190	
60-57-1	EPA Region 4	Sediment ESV	Aquatic and wildlife	0.00190	7, 28
60-57-1	EPA Region 4	Sediment ESV	Wildlife only	0.00770	7, 28
60-57-1	EPA Region 4	Freshwater Refinement Screening Value	Wildlife only	0.01000	7, 28
60-57-1	EPA Region 4	Freshwater Refinement Screening Value	Aquatic and wildlife	0.06200	7, 28
60-57-1	EPA Region 6	Sediment Freshwater	Not specified	0.00190	
60-57-1	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.03000	
60-57-1	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.06180	
60-57-1	Florida	Freshwater ERL	Not specified	0.00002	
60-57-1	Florida	Freshwater LEL	Not specified	0.00200	
60-57-1	Florida	Freshwater MET	Not specified	0.00200	
60-57-1	Florida	Freshwater TEL	Not specified	0.00285	
60-57-1	Florida	Freshwater PEL	Not specified	0.00667	
60-57-1	Florida	Freshwater ERM	Not specified	0.00800	
60-57-1	Florida	Freshwater TET	Not specified	0.30000	
60-57-1	Florida	Freshwater SEL	Not specified	0.91000	
60-57-1	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.18000	
60-57-1	New York DEC	Freshwater Sediment Class A	Not specified	0.18000	23
60-57-1	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	0.78000	
60-57-1	New York DEC	Freshwater Sediment Class C	Not specified	0.78000	22
60-57-1	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.00490	
60-57-1	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	0.00930	

Benchmark Values for Dieldrin in Sediment (Fresh Water)

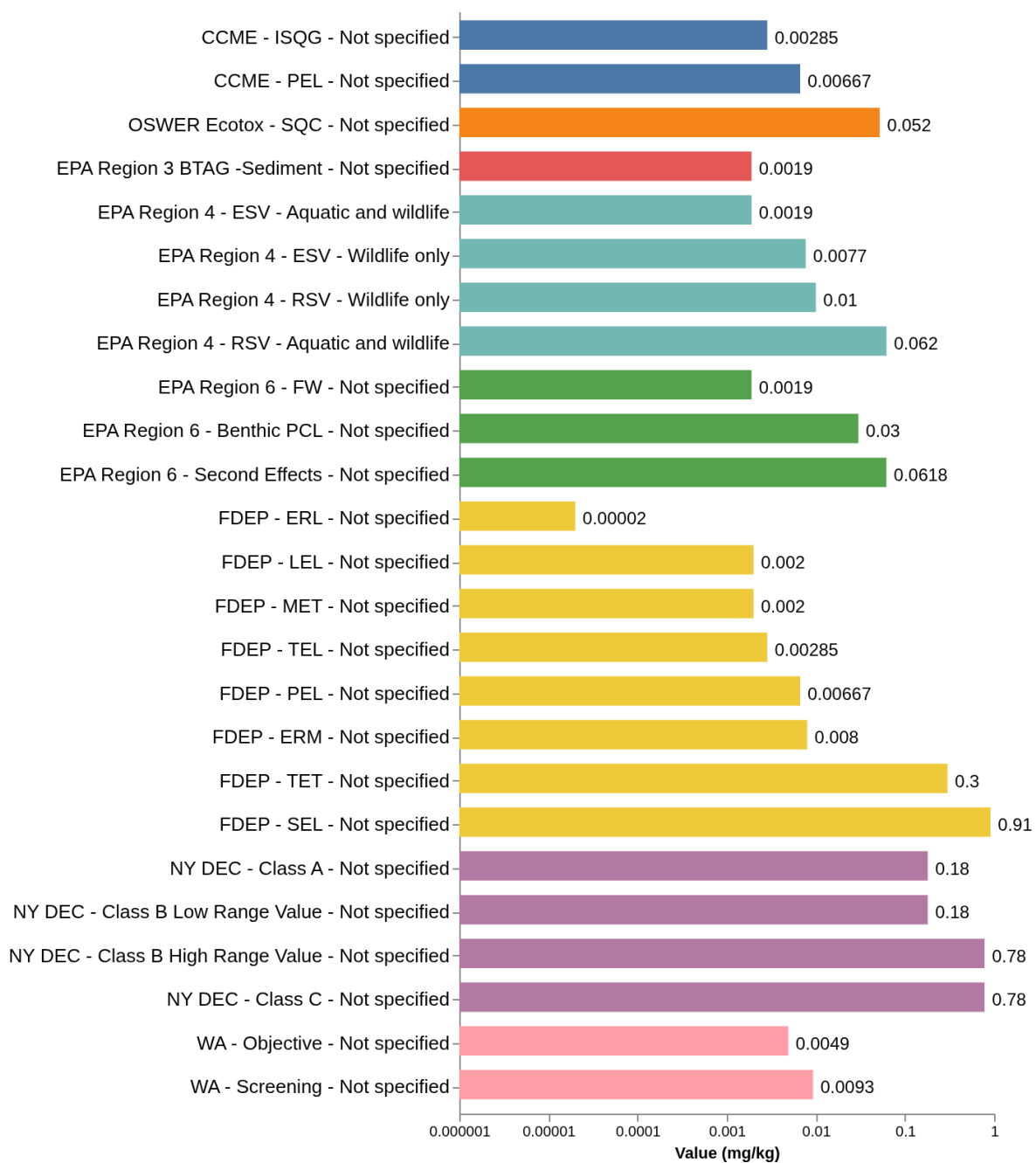


Table 113: Benchmark Values for Diethyl Phthalate in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
84-66-2	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.603	
84-66-2	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.630	28
84-66-2	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	1.105	
84-66-2	EPA Region 6	Sediment Freshwater	Not specified	0.630	
84-66-2	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	5.800	
84-66-2	EPA Region 6	Sediment Freshwater Second Effects	Not specified	11.000	

Benchmark Values for Diethyl Phthalate in Sediment (Fresh Water)

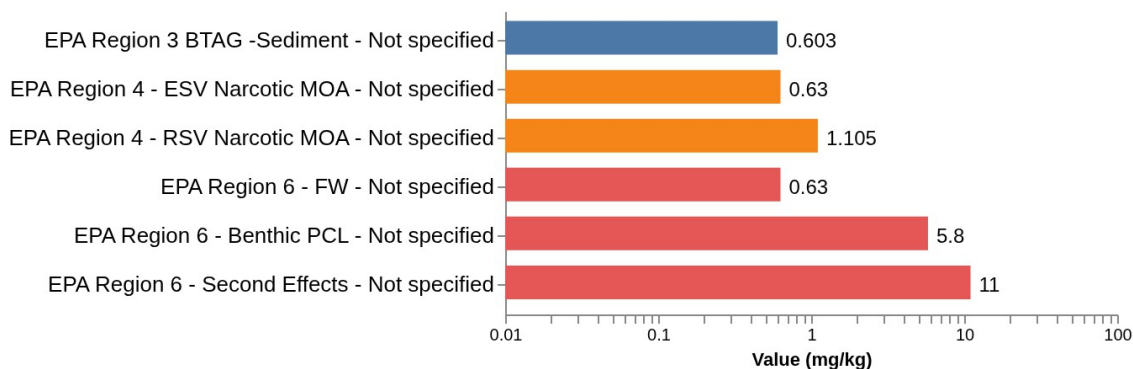


Table 114: Benchmark Values for Dimethoate in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
60-51-5	EPA Region 4	Sediment ESV	Not specified	0.0002	
60-51-5	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.0017	

Benchmark Values for Dimethoate in Sediment (Fresh Water)

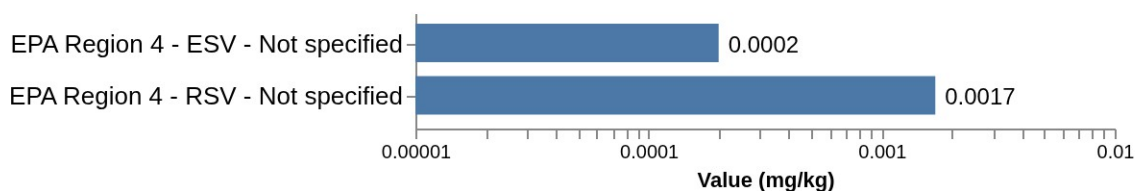


Table 115: Benchmark Values for Dimethylphenol, 2,3- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
526-75-0	EPA Region 4	Sediment ESV	Not specified	0.385
526-75-0	EPA Region 4	Freshwater Refinement Screening Value	Not specified	1.765

Benchmark Values for Dimethylphenol, 2,3- in Sediment (Fresh Water)

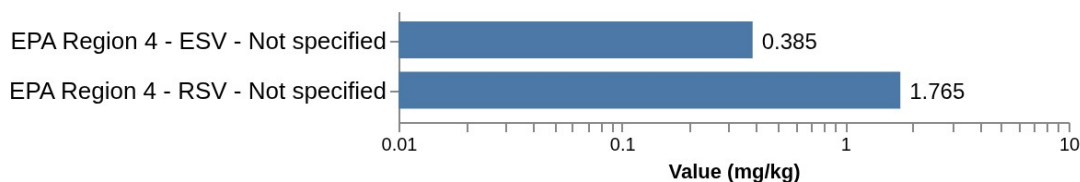


Table 116: Benchmark Values for Dimethylphenol, 2,4- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
105-67-9	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.029
105-67-9	EPA Region 4	Sediment ESV	Not specified	0.039
105-67-9	EPA Region 4	Freshwater Refinement Screening Value	Not specified	1.437

Benchmark Values for Dimethylphenol, 2,4- in Sediment (Fresh Water)

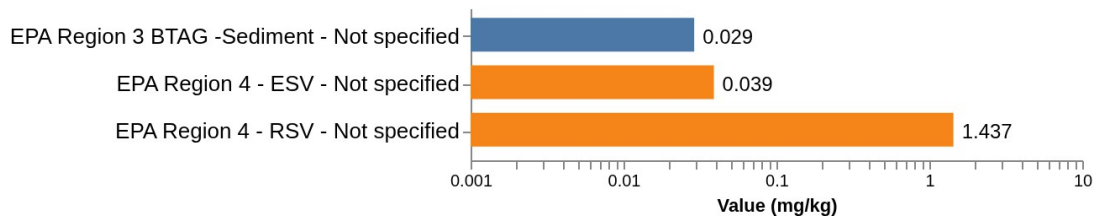


Table 117: Benchmark Values for Dimethylphthalate in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
131-11-3	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.678
131-11-3	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	2.031
131-11-3	EPA Region 6	Sediment Freshwater	Not specified	1.490
131-11-3	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	5.220
131-11-3	EPA Region 6	Sediment Freshwater Second Effects	Not specified	8.900

Benchmark Values for Dimethylphthalate in Sediment (Fresh Water)

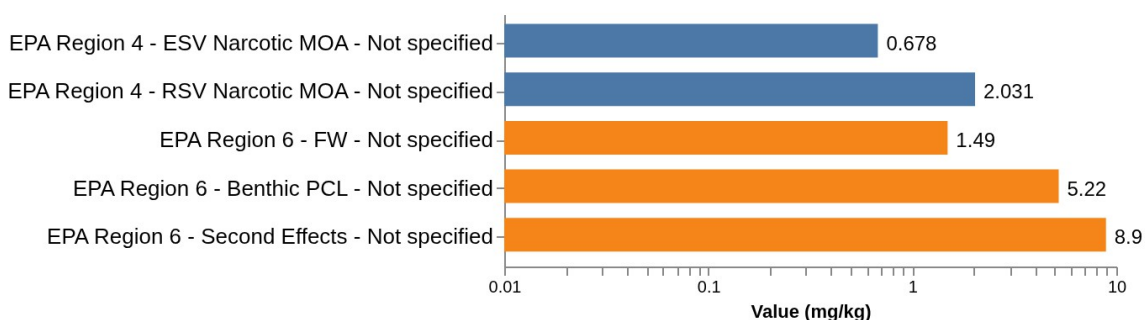


Table 118: Benchmark Values for Dinitroaniline, 3,5- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
618-87-1	EPA Region 4	Sediment ESV	Not specified	0.126
618-87-1	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.140

Benchmark Values for Dinitroaniline, 3,5- in Sediment (Fresh Water)

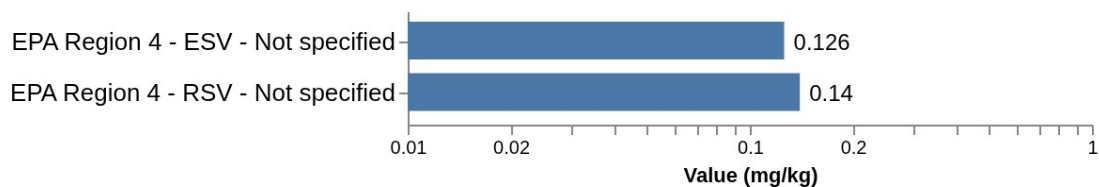


Table 119: Benchmark Values for Dinitrobenzene, 1,3- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
99-65-0	EPA Region 4	Sediment ESV	Not specified	0.040
99-65-0	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.105
99-65-0	EPA Region 6	Sediment Freshwater	Not specified	0.020
99-65-0	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.100
99-65-0	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.190

Benchmark Values for Dinitrobenzene, 1,3- in Sediment (Fresh Water)

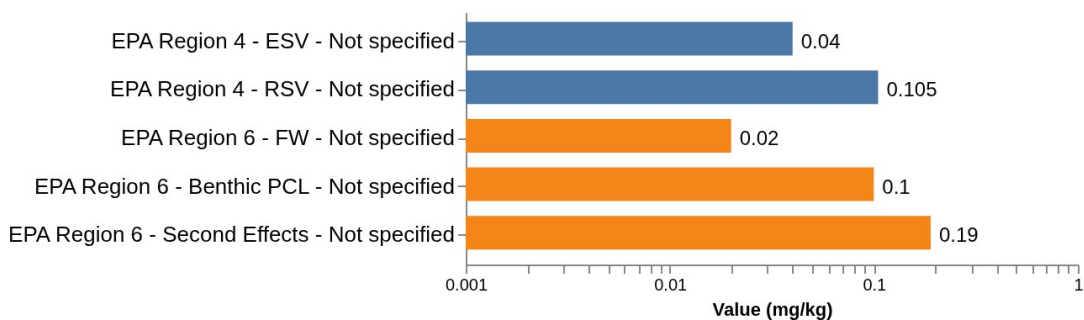


Table 120: Benchmark Values for Dinitro-o-cresol, 4,6- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
534-52-1	EPA Region 4	Sediment ESV	Not specified	1.477
534-52-1	EPA Region 4	Freshwater Refinement Screening Value	Not specified	2.304

Benchmark Values for Dinitro-o-cresol, 4,6- in Sediment (Fresh Water)

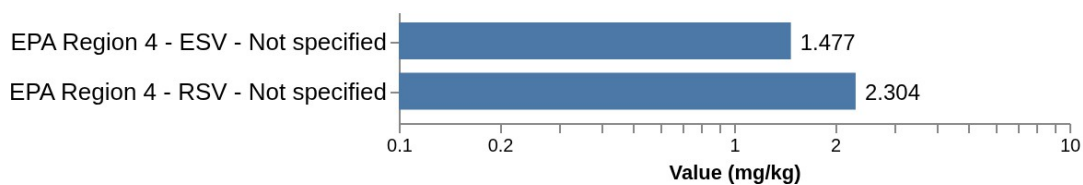


Table 121: Benchmark Values for Dinitrophenol, 2,4- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
51-28-5	EPA Region 4	Sediment ESV	Not specified	0.223
51-28-5	EPA Region 4	Freshwater Refinement Screening Value	Not specified	2.961

Benchmark Values for Dinitrophenol, 2,4- in Sediment (Fresh Water)

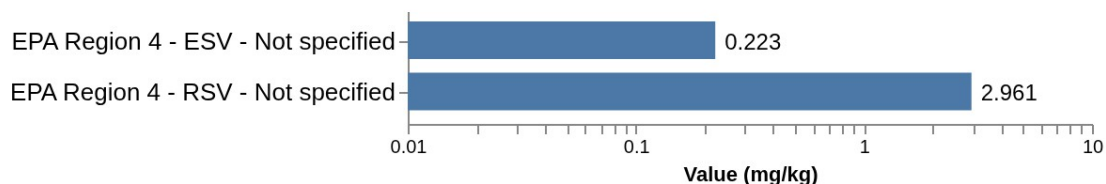


Table 122: Benchmark Values for Dinitrotoluene, 2,3- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
602-01-7	EPA Region 4	Sediment ESV	Not specified	0.008
602-01-7	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.122

Benchmark Values for Dinitrotoluene, 2,3- in Sediment (Fresh Water)

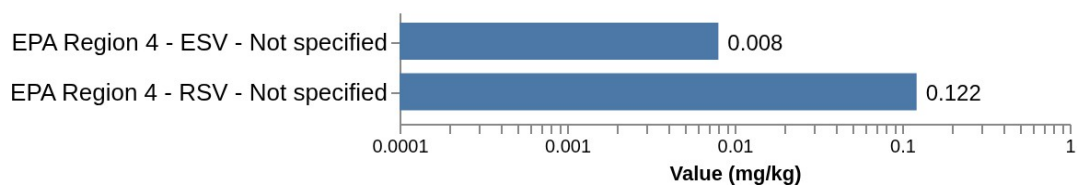


Table 123: Benchmark Values for Dinitrotoluene, 2,4- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
121-14-2	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0416	
121-14-2	EPA Region 4	Sediment ESV	Not specified	0.2900	28
121-14-2	EPA Region 4	Freshwater Refinement Screening Value	Not specified	2.9000	28
121-14-2	EPA Region 6	Sediment Freshwater	Not specified	1.3400	
121-14-2	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	4.6800	
121-14-2	EPA Region 6	Sediment Freshwater Second Effects	Not specified	8.0200	

Benchmark Values for Dinitrotoluene, 2,4- in Sediment (Fresh Water)

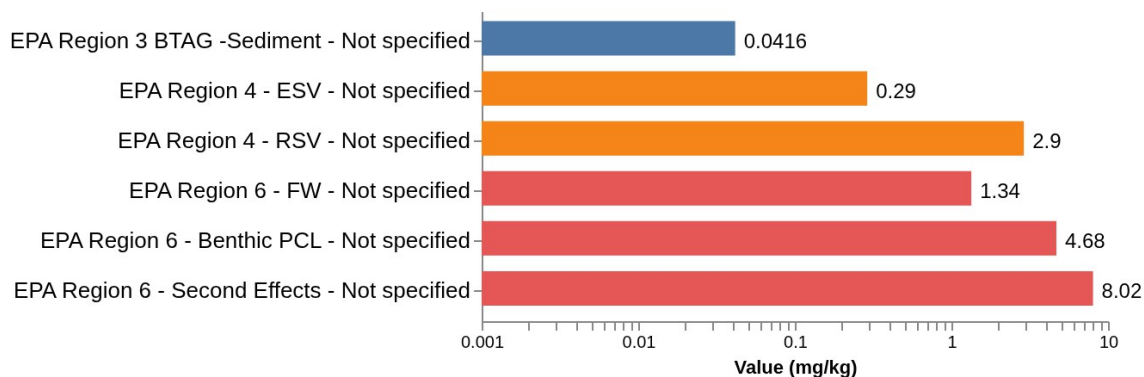


Table 124: Benchmark Values for Dinitrotoluene, 2,5- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
619-15-8	EPA Region 4	Sediment ESV	Not specified	0.022
619-15-8	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.144

Benchmark Values for Dinitrotoluene, 2,5- in Sediment (Fresh Water)

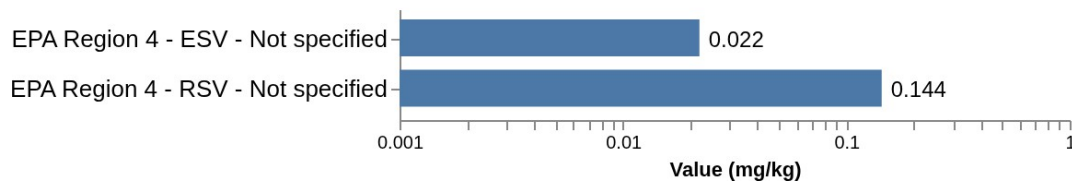


Table 125: Benchmark Values for Dinitrotoluene, 2,6- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
606-20-2	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.131
606-20-2	EPA Region 4	Sediment ESV	Not specified	0.296

Benchmark Values for Dinitrotoluene, 2,6- in Sediment (Fresh Water)

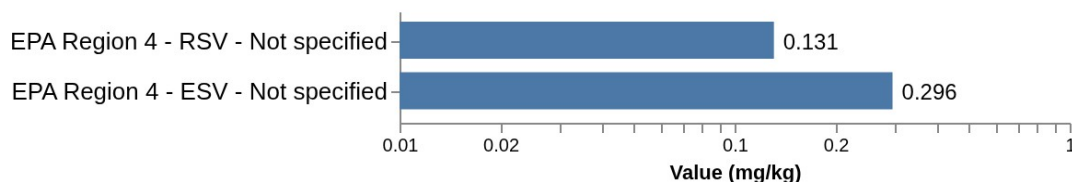


Table 126: Benchmark Values for Dinitrotoluene, 2-Amino-4,6- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
35572-78-2	EPA Region 4	Sediment ESV	Not specified	0.047
35572-78-2	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.140
35572-78-2	EPA Region 6	Sediment Freshwater	Not specified	4.600
35572-78-2	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	16.090
35572-78-2	EPA Region 6	Sediment Freshwater Second Effects	Not specified	27.580

Benchmark Values for Dinitrotoluene, 2-Amino-4,6- in Sediment (Fresh Water)

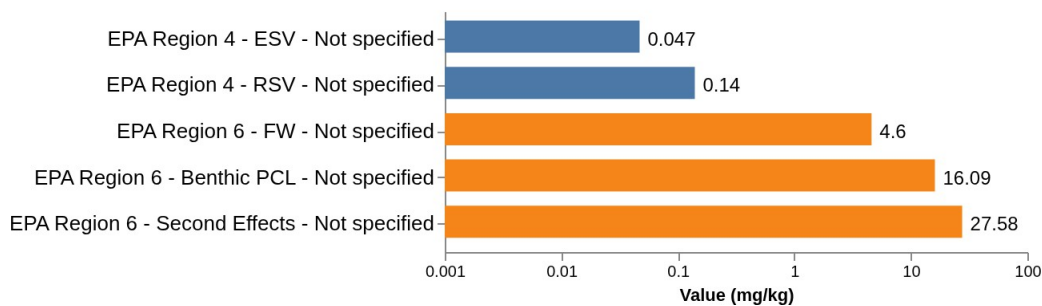


Table 127: Benchmark Values for Dinitrotoluene, 3,5- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
618-85-9	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.144
618-85-9	EPA Region 4	Sediment ESV	Not specified	0.381

Benchmark Values for Dinitrotoluene, 3,5- in Sediment (Fresh Water)

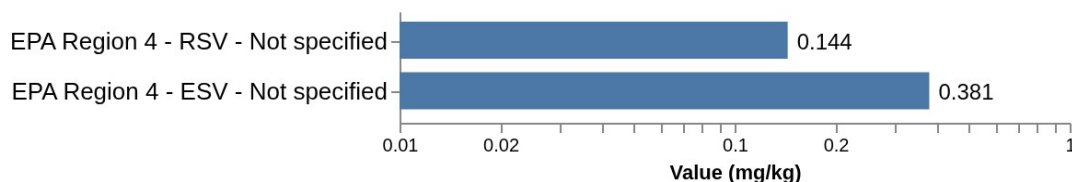


Table 128: Benchmark Values for Dinitrotoluene, 4-Amino-2,6- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
19406-51-0	EPA Region 4	Sediment ESV	Not specified	0.028
19406-51-0	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.070

Benchmark Values for Dinitrotoluene, 4-Amino-2,6- in Sediment (Fresh Water)

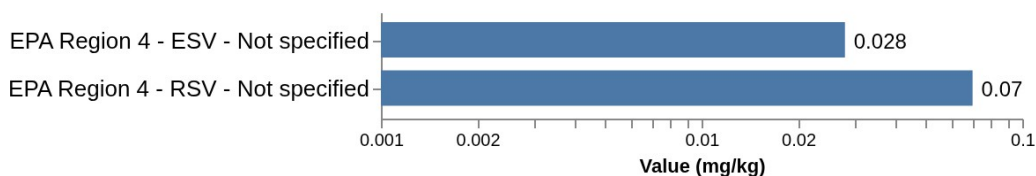


Table 129: Benchmark Values for Dinoseb in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
88-85-7	EPA Region 3	BTAG - Freshwater Sediment	Not specified	0.000611
88-85-7	EPA Region 4	Sediment ESV	Not specified	0.015000
88-85-7	EPA Region 4	Freshwater Refinement Screening Value	Not specified	1.817000

Benchmark Values for Dinoseb in Sediment (Fresh Water)

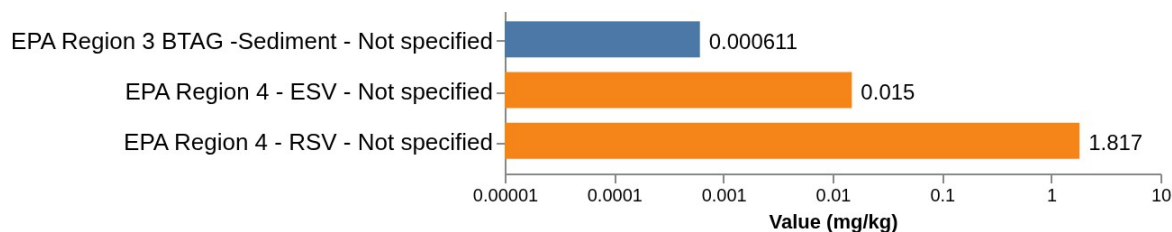


Table 130: Benchmark Values for Dioxin (sum TEQ) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
000000-16-4	New York DEC	Freshwater Sediment Class A	Not specified	5.000000e-07	23
000000-16-4	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	5.000000e-07	22

Benchmark Values for Dioxin (sum TEQ) in Sediment (Fresh Water)

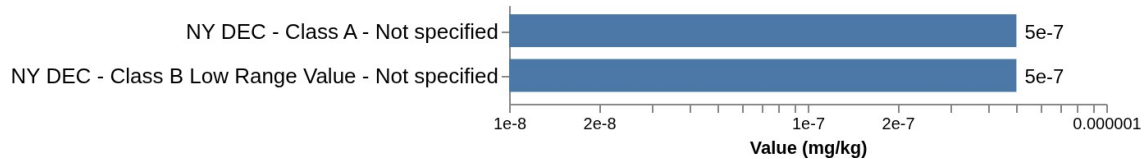


Table 131: Benchmark Values for Diphenylhydrazine, 1,2- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
122-66-7	EPA Region 4	Sediment ESV	Not specified	0.0039
122-66-7	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.1060

Benchmark Values for Diphenylhydrazine, 1,2- in Sediment (Fresh Water)

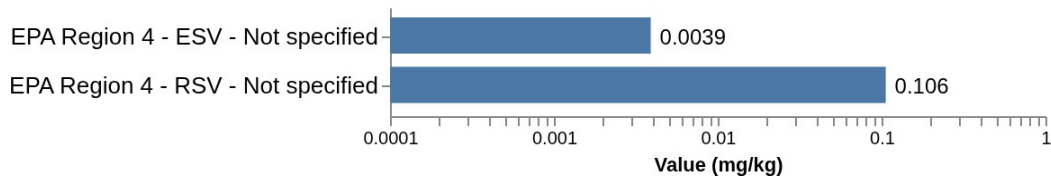


Table 132: Benchmark Values for Diquat in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
2764-72-9	EPA Region 4	Sediment ESV	Not specified	0.025
2764-72-9	EPA Region 4	Freshwater Refinement Screening Value	Not specified	2.498

Benchmark Values for Diquat in Sediment (Fresh Water)

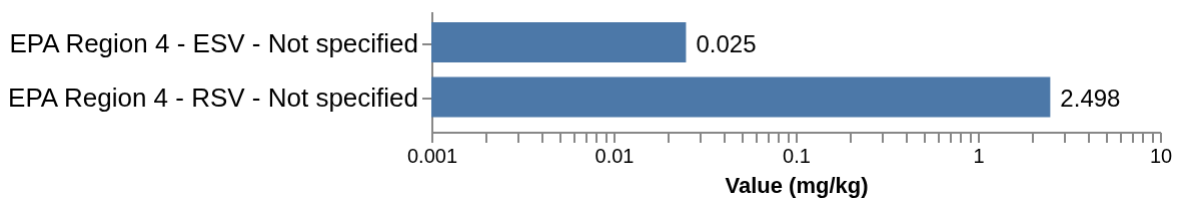


Table 133: Benchmark Values for Endosulfan I in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
959-98-8	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0029
959-98-8	EPA Region 6	Sediment Freshwater	Not specified	0.0029
959-98-8	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.0050
959-98-8	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.0074

Benchmark Values for Endosulfan I in Sediment (Fresh Water)

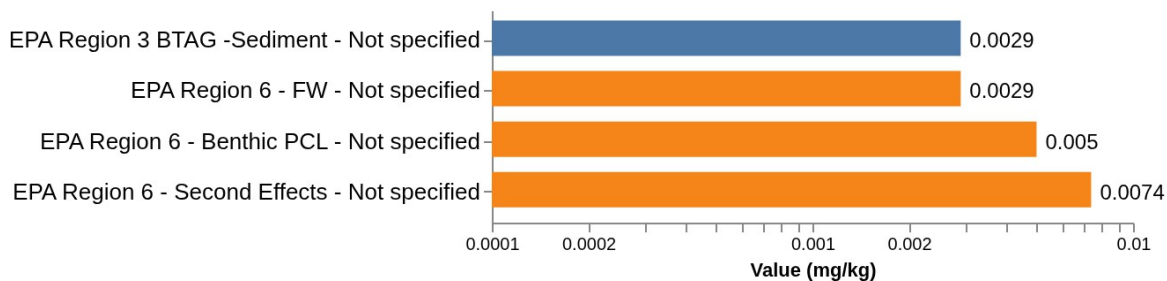


Table 134: Benchmark Values for Endosulfan II in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
33213-65-9	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0140
33213-65-9	EPA Region 4	Sediment ESV	Not specified	0.0009
33213-65-9	EPA Region 6	Sediment Freshwater	Not specified	0.0140
33213-65-9	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.0250
33213-65-9	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.0350

Benchmark Values for Endosulfan II in Sediment (Fresh Water)

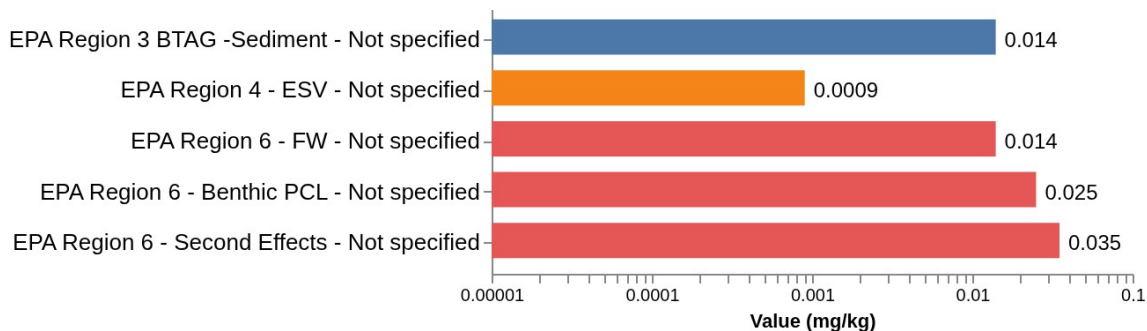


Table 135: Benchmark Values for Endosulfan Sulfate in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
1031-07-8	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0054
1031-07-8	EPA Region 4	Sediment ESV	Not specified	0.0007

Benchmark Values for Endosulfan Sulfate in Sediment (Fresh Water)

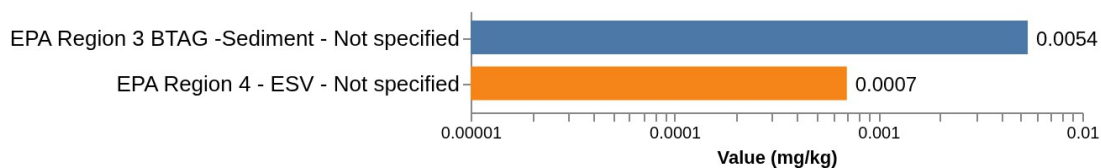


Table 136: Benchmark Values for Endosulfan in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
115-29-7	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.00214	
115-29-7	EPA Region 4	Sediment ESV	Not specified	0.00001	28
115-29-7	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.00100	28
115-29-7	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.00100	
115-29-7	New York DEC	Freshwater Sediment Class A	Not specified	0.00100	23
115-29-7	New York DEC	Freshwater Sediment Class C	Not specified	0.02000	22
115-29-7	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	0.02000	

Benchmark Values for Endosulfan in Sediment (Fresh Water)

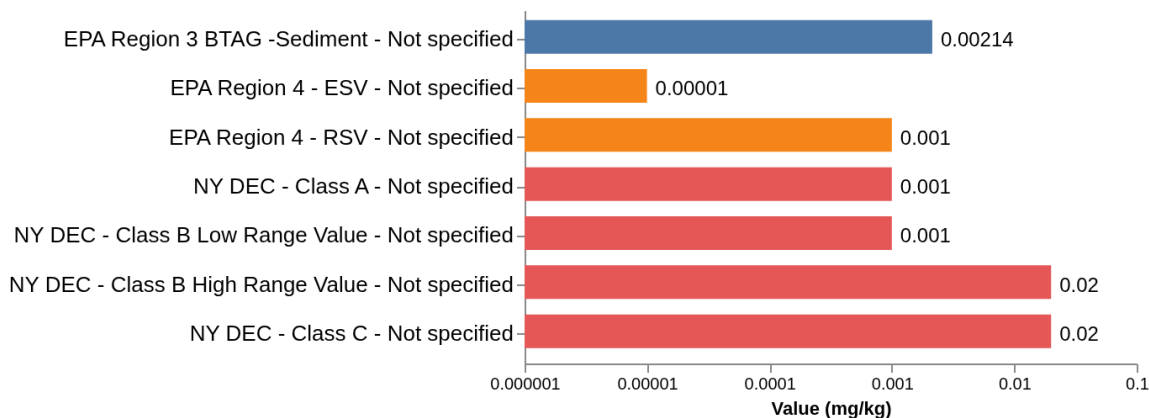


Table 137: Benchmark Values for Endrin ketone in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
53494-70-5	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.0085	22
53494-70-5	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	0.0085	

Benchmark Values for Endrin ketone in Sediment (Fresh Water)

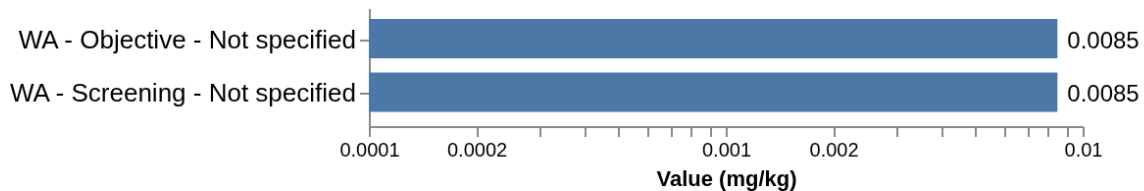


Table 138: Benchmark Values for Endrin in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
72-20-8	Canada	Sediment Freshwater ISQG	Not specified	0.00267	
72-20-8	Canada	Sediment Freshwater PEL	Not specified	0.06240	
72-20-8	EPA OSWER	Freshwater SQC	Not specified	0.02000	
72-20-8	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.00222	
72-20-8	EPA Region 4	Sediment ESV	Not specified	0.00220	7, 28
72-20-8	EPA Region 4	Sediment ESV	Wildlife only	0.00800	7, 28
72-20-8	EPA Region 4	Freshwater Refinement Screening Value	Wildlife only	0.01800	7, 28
72-20-8	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.20700	7, 28
72-20-8	EPA Region 6	Sediment Freshwater	Not specified	0.00222	
72-20-8	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.10000	
72-20-8	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.20700	
72-20-8	Florida	Freshwater ERL	Not specified	0.00002	
72-20-8	Florida	Freshwater TEL	Not specified	0.00267	
72-20-8	Florida	Freshwater LEL	Not specified	0.00300	
72-20-8	Florida	Freshwater MET	Not specified	0.00800	
72-20-8	Florida	Freshwater ERM	Not specified	0.04500	
72-20-8	Florida	Freshwater PEL	Not specified	0.06240	
72-20-8	Florida	Freshwater TET	Not specified	0.50000	
72-20-8	Florida	Freshwater SEL	Not specified	1.30000	
72-20-8	New York DEC	Freshwater Sediment Class A	Not specified	0.09000	23
72-20-8	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.09000	
72-20-8	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	0.22000	
72-20-8	New York DEC	Freshwater Sediment Class C	Not specified	0.22000	22

Benchmark Values for Endrin in Sediment (Fresh Water)

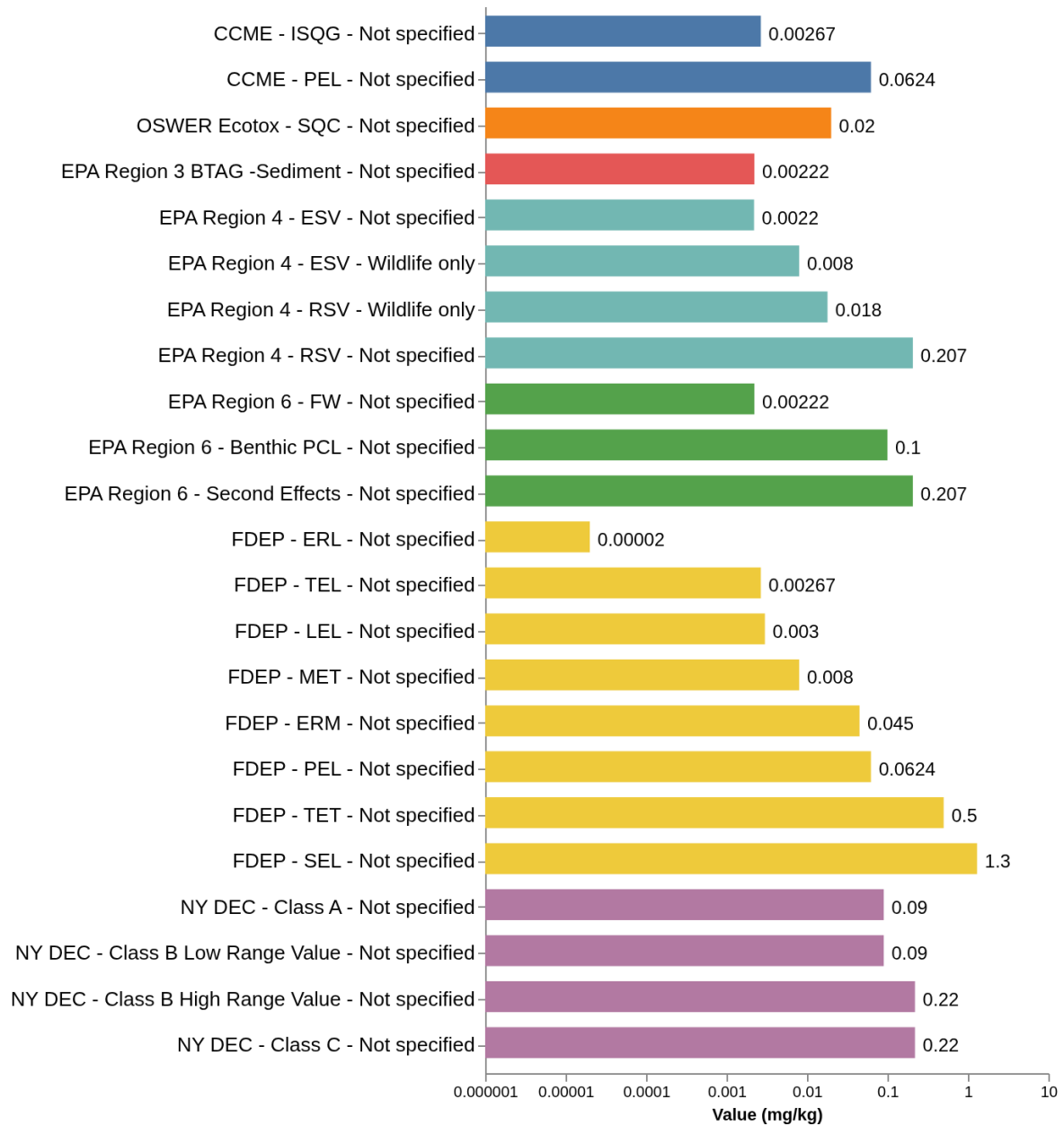


Table 139: Benchmark Values for Ethylbenzene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
100-41-4	EPA Region 3	BTAG – Freshwater Sediment	Not specified	1.100	
100-41-4	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.290	
100-41-4	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	1.467	
100-41-4	EPA Region 6	Sediment Freshwater	Not specified	2.630	
100-41-4	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	5.260	
100-41-4	EPA Region 6	Sediment Freshwater Second Effects	Not specified	7.880	
100-41-4	New York DEC	Freshwater Sediment Class A	Not specified	0.430	23
100-41-4	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.430	
100-41-4	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	3.700	
100-41-4	New York DEC	Freshwater Sediment Class C	Not specified	3.700	22

Benchmark Values for Ethylbenzene in Sediment (Fresh Water)

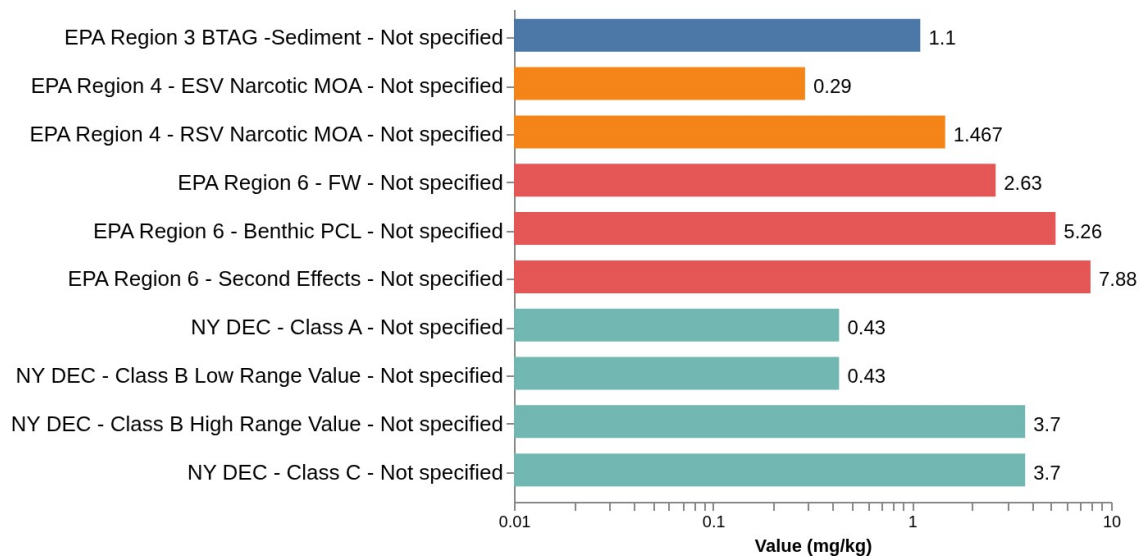
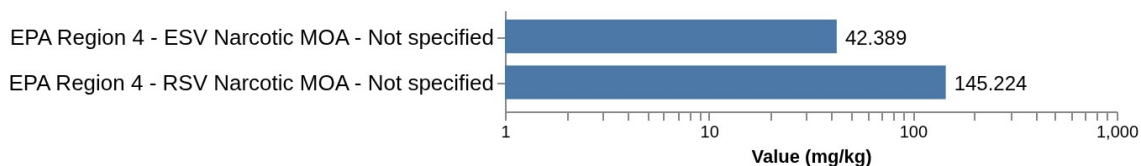


Table 140: Benchmark Values for Ethylene Glycol in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
107-21-1	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	42.389
107-21-1	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	145.224

Benchmark Values for Ethylene Glycol in Sediment (Fresh Water)**Table 141: Benchmark Values for Fluoranthene in Sediment (Fresh Water)**

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
206-44-0	Canada	Sediment Freshwater ISQG	Not specified	0.111	
206-44-0	Canada	Sediment Freshwater PEL	Not specified	2.355	
206-44-0	EPA OSWER	Freshwater SQC	Not specified	2.900	
206-44-0	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.423	
206-44-0	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.423	7, 28
206-44-0	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	7.070	7
206-44-0	EPA Region 6	Sediment Freshwater	Not specified	0.423	
206-44-0	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	1.330	
206-44-0	EPA Region 6	Sediment Freshwater Second Effects	Not specified	2.230	
206-44-0	Florida	Freshwater TEL	Not specified	0.111	
206-44-0	Florida	Freshwater MET	Not specified	0.600	
206-44-0	Florida	Freshwater ERL	Not specified	0.600	
206-44-0	Florida	Freshwater LEL	Not specified	0.750	
206-44-0	Florida	Freshwater TET	Not specified	2.000	
206-44-0	Florida	Freshwater PEL	Not specified	2.355	
206-44-0	Florida	Freshwater ERM	Not specified	3.600	
206-44-0	Florida	Freshwater SEL	Not specified	10.200	

Benchmark Values for Fluoranthene in Sediment (Fresh Water)

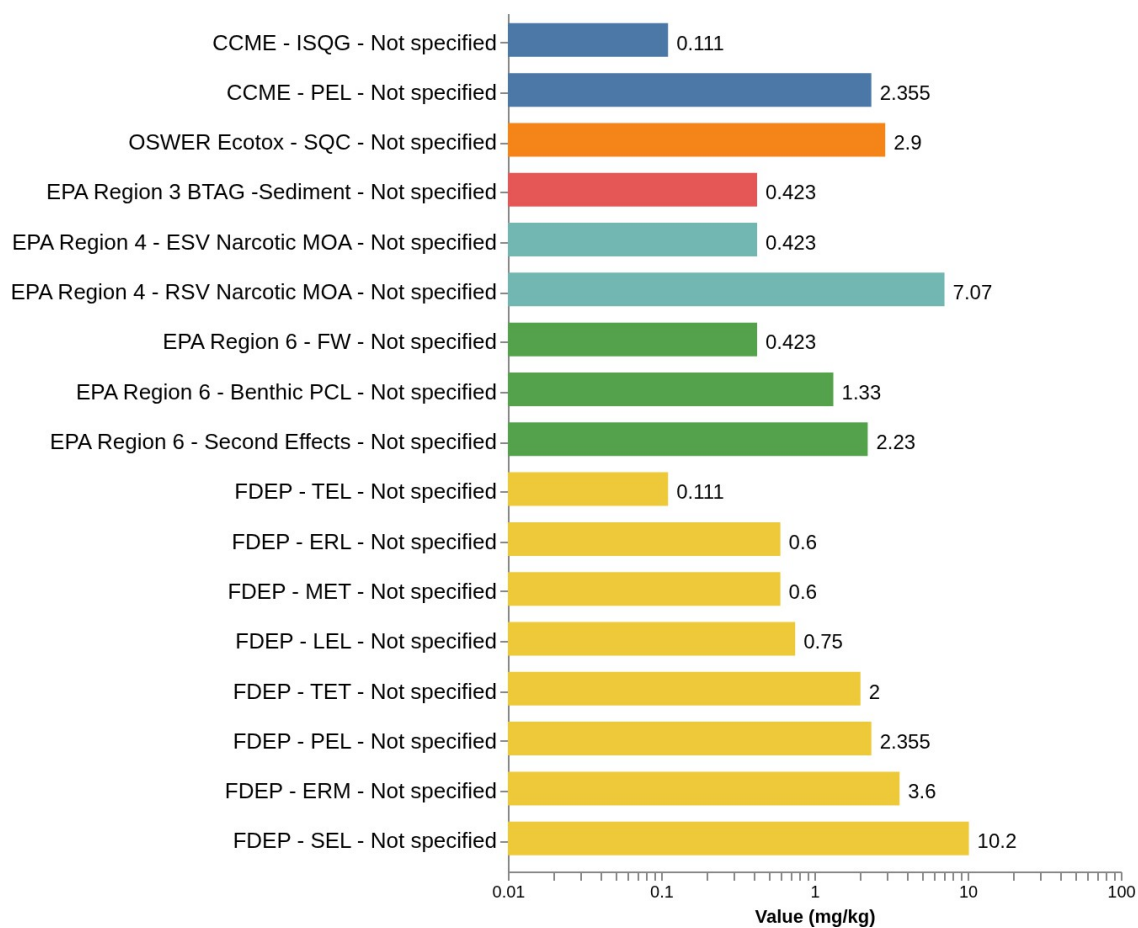


Table 142: Benchmark Values for Fluorene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
86-73-7	Canada	Sediment Freshwater ISQG	Not specified	0.0212	
86-73-7	Canada	Sediment Freshwater PEL	Not specified	0.1440	
86-73-7	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0774	
86-73-7	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.0770	28
86-73-7	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	5.3800	
86-73-7	EPA Region 6	Sediment Freshwater	Not specified	0.0774	
86-73-7	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.3100	
86-73-7	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.5360	
86-73-7	Florida	Freshwater ERL	Not specified	0.0350	
86-73-7	Florida	Freshwater LEL	Not specified	0.1900	
86-73-7	Florida	Freshwater ERM	Not specified	0.6400	
86-73-7	Florida	Freshwater SEL	Not specified	1.6000	

Benchmark Values for Fluorene in Sediment (Fresh Water)

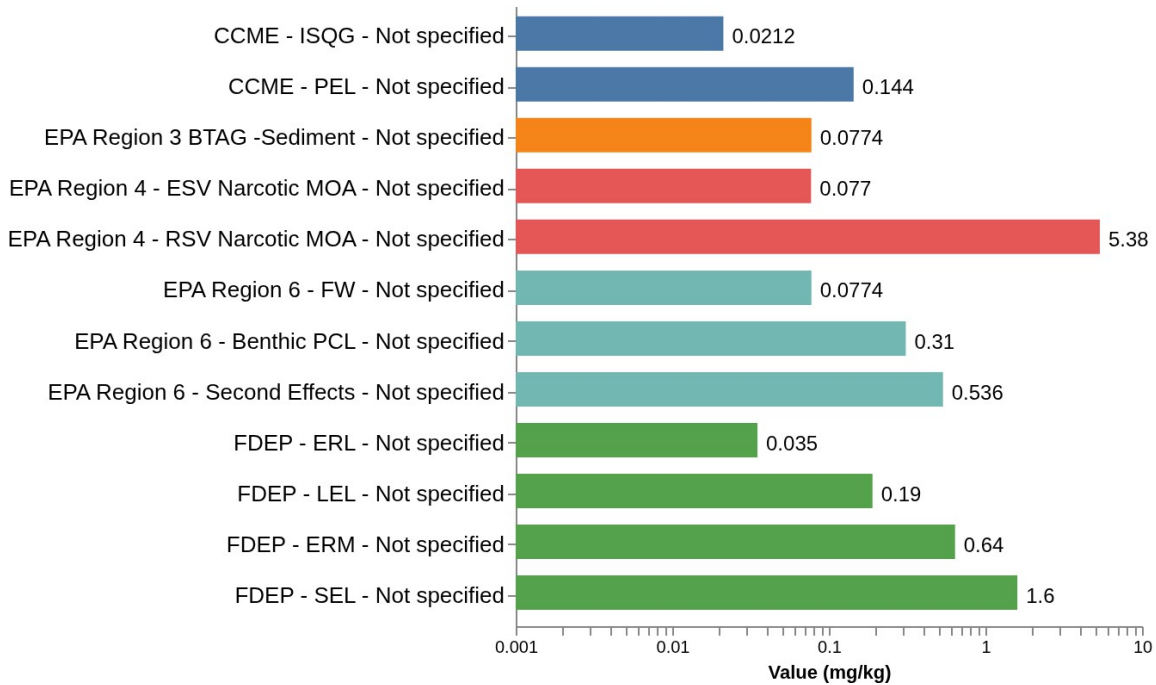


Table 143: Benchmark Values for Halofenozide in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
112226-61-6	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.85	
112226-61-6	New York DEC	Freshwater Sediment Class A	Not specified	0.85	23
112226-61-6	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	6.70	
112226-61-6	New York DEC	Freshwater Sediment Class C	Not specified	6.70	22

Benchmark Values for Halofenozide in Sediment (Fresh Water)

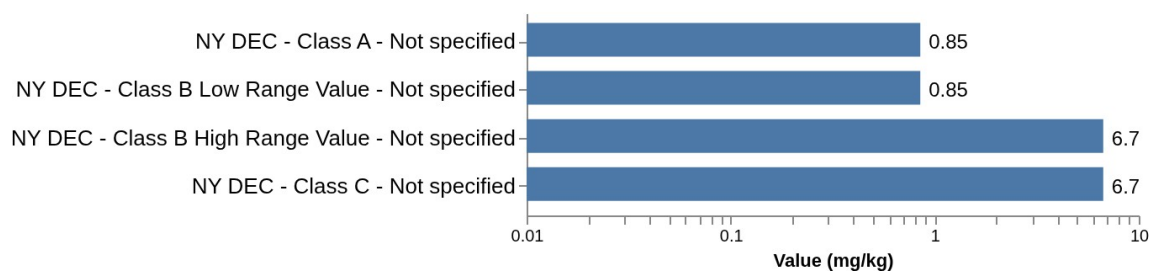


Table 144: Benchmark Values for Heptachlor Epoxide in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
1024-57-3	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.00247	
1024-57-3	EPA Region 4	Sediment ESV	Not specified	0.00250	28
1024-57-3	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.01600	28
1024-57-3	EPA Region 6	Sediment Freshwater	Not specified	0.00247	
1024-57-3	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.01000	
1024-57-3	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.01600	
1024-57-3	Florida	Freshwater TEL	Not specified	0.00060	
1024-57-3	Florida	Freshwater PEL	Not specified	0.00274	
1024-57-3	Florida	Freshwater LEL	Not specified	0.00500	
1024-57-3	Florida	Freshwater MET	Not specified	0.00500	
1024-57-3	Florida	Freshwater TET	Not specified	0.03000	
1024-57-3	Florida	Freshwater SEL	Not specified	0.05000	
1024-57-3	New York DEC	Freshwater Sediment Class A	Not specified	0.01500	23
1024-57-3	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.01500	
1024-57-3	New York DEC	Freshwater Sediment Class C	Not specified	2.10000	22
1024-57-3	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	2.10000	

Benchmark Values for Heptachlor Epoxide in Sediment (Fresh Water)

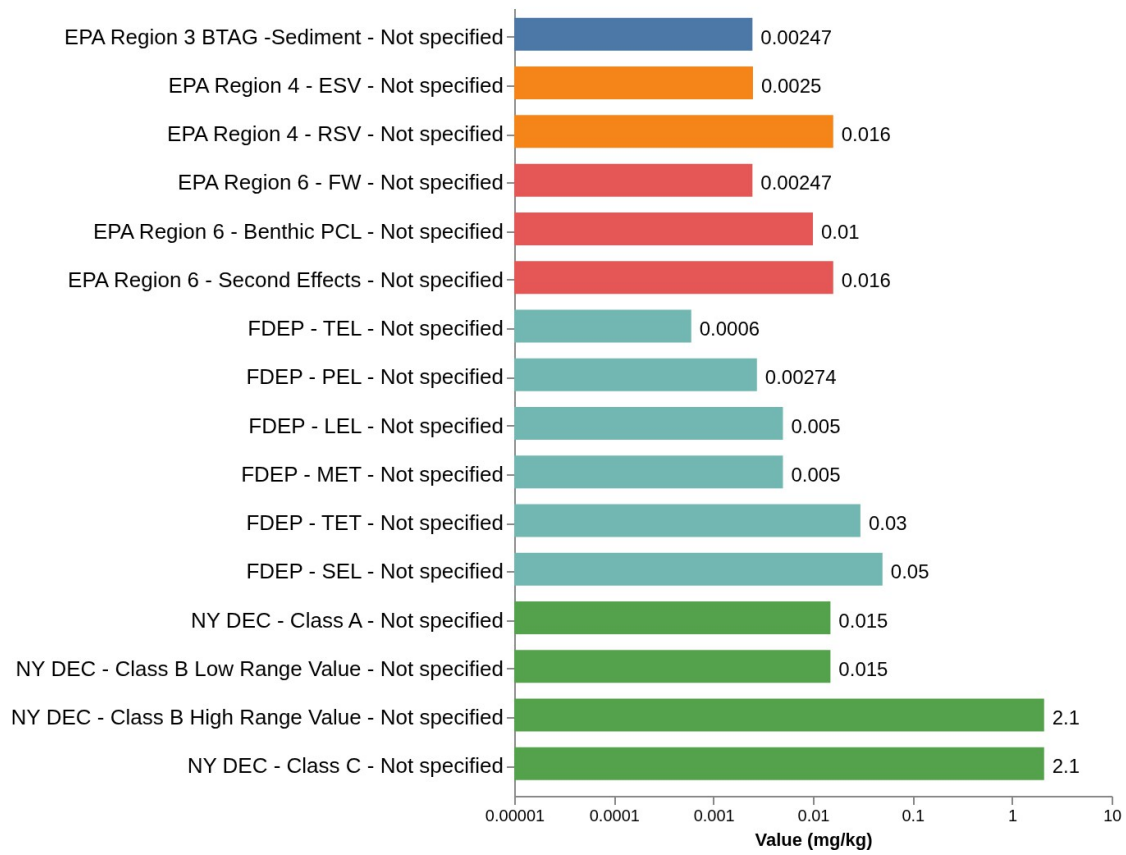


Table 145: Benchmark Values for Heptachlor in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
76-44-8	Canada	Sediment Freshwater ISQG	Not specified	0.00060	
76-44-8	Canada	Sediment Freshwater PEL	Not specified	0.00274	
76-44-8	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.06800	
76-44-8	EPA Region 4	Sediment ESV	Aquatic and wildlife	0.00060	7
76-44-8	EPA Region 4	Freshwater Refinement Screening Value	Aquatic and wildlife	0.07500	7, 28
76-44-8	EPA Region 6	Sediment Freshwater	Not specified	0.00060	
76-44-8	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.00200	
76-44-8	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.00274	
76-44-8	New York DEC	Freshwater Sediment Class A	Not specified	0.07500	23
76-44-8	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.07500	
76-44-8	New York DEC	Freshwater Sediment Class C	Not specified	10.00000	22
76-44-8	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	10.00000	

Benchmark Values for Heptachlor in Sediment (Fresh Water)

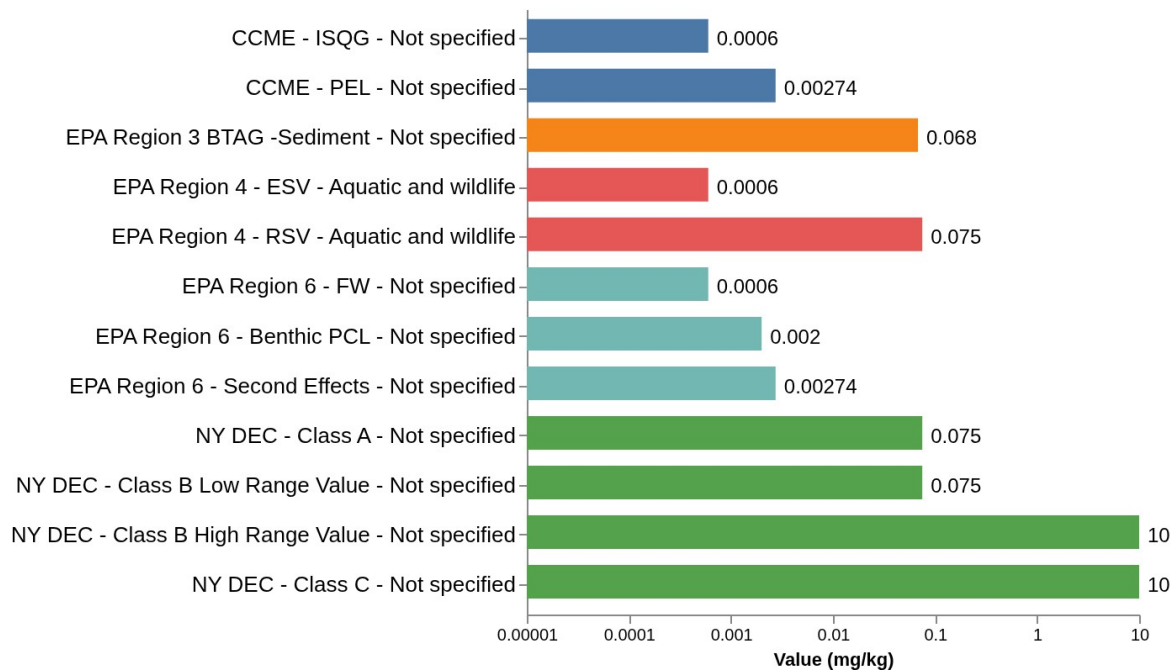


Table 146: Benchmark Values for Hexabromocyclododecane (HBCD) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
3194-55-6	ECC Canada	Freshwater LTC Sediment	Not specified	1.6

Benchmark Values for Hexabromocyclododecane (HBCD) in Sediment (Fresh Water)

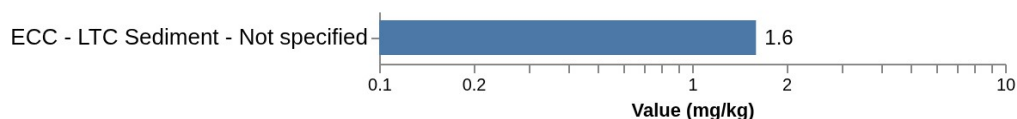


Table 147: Benchmark Values for Hexachlorobenzene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
118-74-1	British Columbia	Freshwater Sediment LTC – No Effect	Not specified	0.011	
118-74-1	British Columbia	Freshwater Sediment LTC – Probable Effect	Not specified	0.241	
118-74-1	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.020	
118-74-1	EPA Region 4	Sediment ESV	Aquatic and wildlife	0.020	7
118-74-1	EPA Region 4	Freshwater Refinement Screening Value	Aquatic and wildlife	0.240	7
118-74-1	EPA Region 6	Sediment Freshwater	Not specified	0.020	
118-74-1	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.130	
118-74-1	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.240	

Benchmark Values for Hexachlorobenzene in Sediment (Fresh Water)

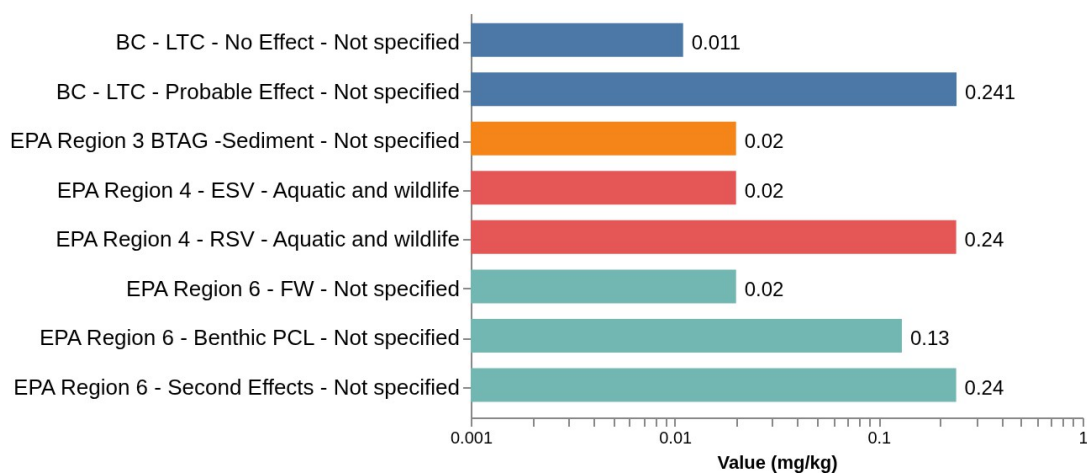


Table 148: Benchmark Values for Hexachlorobutadiene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
87-68-3	EPA Region 6	Sediment Freshwater	Not specified	0.055	
87-68-3	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.300	
87-68-3	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.550	
87-68-3	New York DEC	Freshwater Sediment Class A	Not specified	1.200	23
87-68-3	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	1.200	
87-68-3	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	12.000	
87-68-3	New York DEC	Freshwater Sediment Class C	Not specified	12.000	22

Benchmark Values for Hexachlorobutadiene in Sediment (Fresh Water)

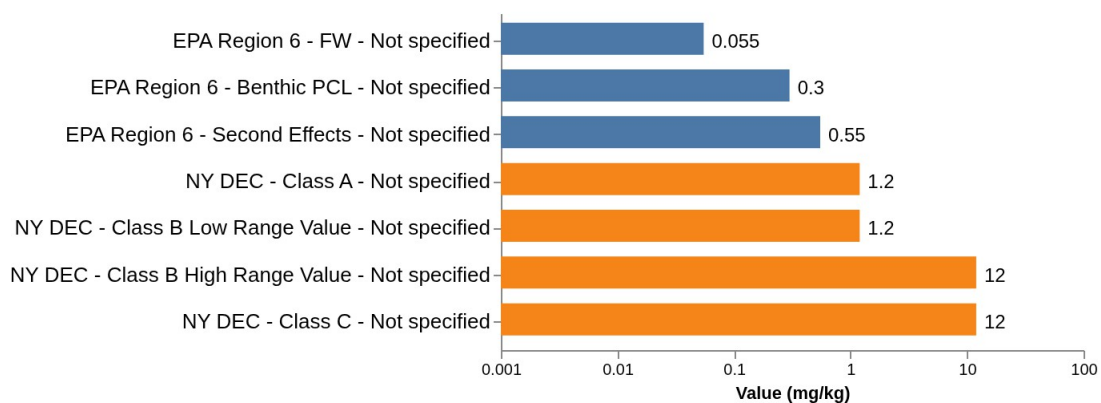


Table 149: Benchmark Values for Hexachlorocyclohexane, (total) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
000000-02-2	British Columbia	Freshwater Sediment LTC – No Effect	Not specified	0.0031
000000-02-2	British Columbia	Freshwater Sediment LTC – Probable Effect	Not specified	0.1210

Benchmark Values for Hexachlorocyclohexane, (total) in Sediment (Fresh Water)

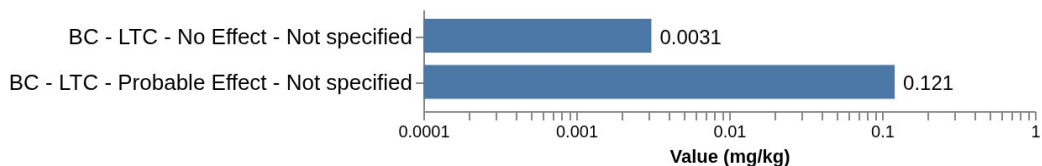


Table 150: Benchmark Values for Hexachlorocyclohexane, Alpha- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
319-84-6	British Columbia	Freshwater Sediment LTC – No Effect	Not specified	0.0061	
319-84-6	British Columbia	Freshwater Sediment LTC – Probable Effect	Not specified	0.1010	
319-84-6	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0060	
319-84-6	EPA Region 4	Sediment ESV	Not specified	0.0003	7
319-84-6	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.0060	7
319-84-6	EPA Region 6	Sediment Freshwater	Not specified	0.0060	
319-84-6	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.0500	
319-84-6	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.1000	

Benchmark Values for Hexachlorocyclohexane, Alpha- in Sediment (Fresh Water)

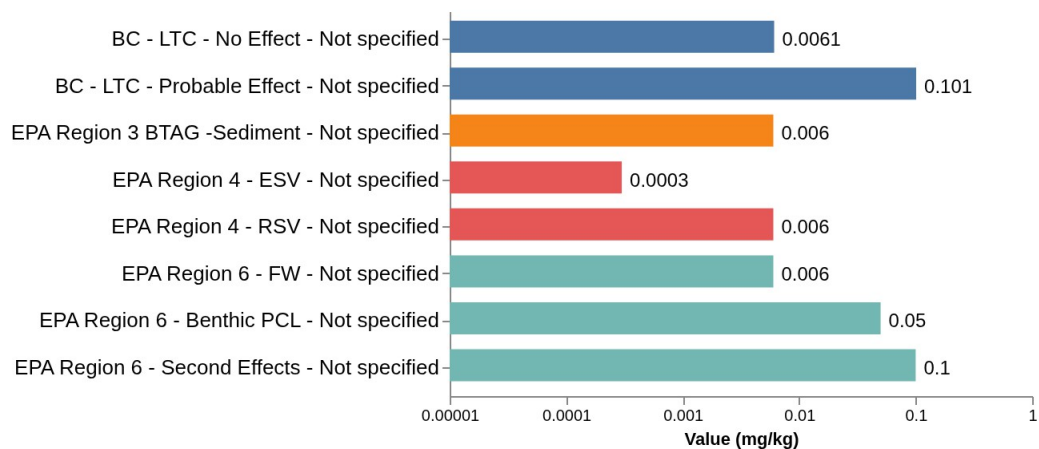


Table 151: Benchmark Values for Hexachlorocyclohexane, Beta- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
319-85-7	British Columbia	Freshwater Sediment LTC – No Effect	Not specified	0.0051	
319-85-7	British Columbia	Freshwater Sediment LTC – Probable Effect	Not specified	0.2110	
319-85-7	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0050	
319-85-7	EPA Region 4	Sediment ESV	Aquatic only	0.0050	7
319-85-7	EPA Region 4	Freshwater Refinement Screening Value	Aquatic only	0.0072	7, 28
319-85-7	EPA Region 4	Sediment ESV	Wildlife only	0.3000	7, 28
319-85-7	EPA Region 4	Freshwater Refinement Screening Value	Wildlife only	1.5000	7, 28
319-85-7	EPA Region 6	Sediment Freshwater	Not specified	0.0050	
319-85-7	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.1100	
319-85-7	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.2100	
319-85-7	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.0072	
319-85-7	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	0.0110	

Benchmark Values for Hexachlorocyclohexane, Beta- in Sediment (Fresh Water)

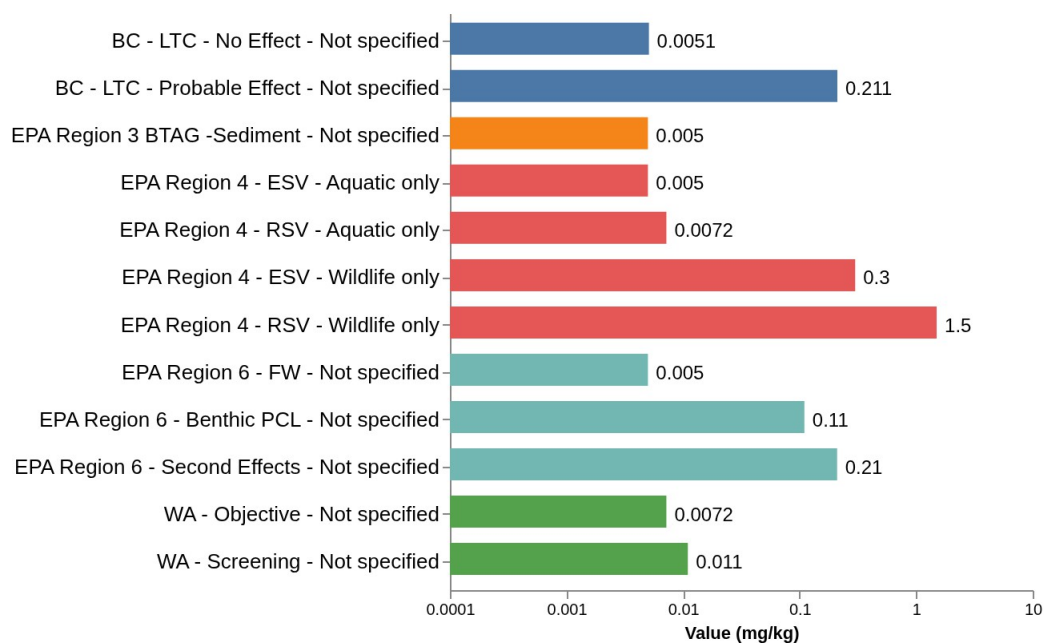


Table 152: Benchmark Values for Hexachlorocyclohexane, Delta- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
319-86-8	EPA Region 3	BTAG – Freshwater Sediment	Not specified	6.40
319-86-8	EPA Region 6	Sediment Freshwater	Not specified	0.13
319-86-8	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	1.22
319-86-8	EPA Region 6	Sediment Freshwater Second Effects	Not specified	2.30

Benchmark Values for Hexachlorocyclohexane, Delta- in Sediment (Fresh Water)

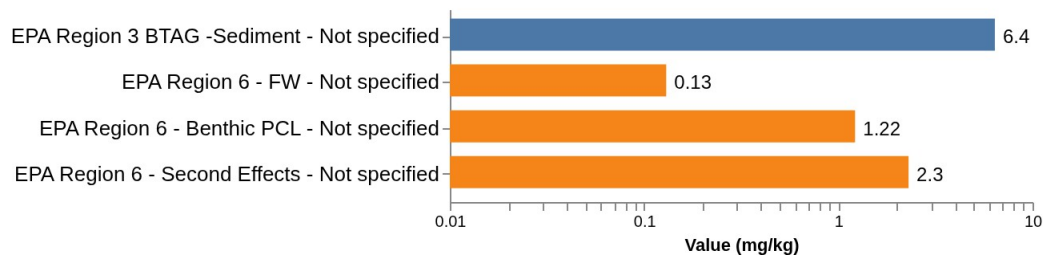


Table 153: Benchmark Values for Hexachlorocyclohexane, Gamma- (Lindane) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
58-89-9	Canada	Sediment Freshwater ISQG	Not specified	0.00094	
58-89-9	Canada	Sediment Freshwater PEL	Not specified	0.00138	
58-89-9	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.00237	
58-89-9	EPA Region 4	Sediment ESV	Aquatic only	0.00240	7
58-89-9	EPA Region 4	Freshwater Refinement Screening Value	Aquatic only	0.00500	7
58-89-9	EPA Region 4	Sediment ESV	Wildlife only	0.01000	7
58-89-9	EPA Region 4	Freshwater Refinement Screening Value	Wildlife only	0.10000	7
58-89-9	EPA Region 6	Sediment Freshwater	Not specified	0.00237	
58-89-9	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.00400	
58-89-9	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.00499	
58-89-9	Florida	Freshwater TEL	Not specified	0.00094	
58-89-9	Florida	Freshwater PEL	Not specified	0.00138	
58-89-9	Florida	Freshwater MET	Not specified	0.00300	
58-89-9	Florida	Freshwater LEL	Not specified	0.00300	
58-89-9	Florida	Freshwater TET	Not specified	0.00900	
58-89-9	Florida	Freshwater SEL	Not specified	0.01000	
58-89-9	New York DEC	Freshwater Sediment Class A	Not specified	0.04700	23
58-89-9	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.04700	
58-89-9	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	0.07800	
58-89-9	New York DEC	Freshwater Sediment Class C	Not specified	0.07800	22

Benchmark Values for Hexachlorocyclohexane, Gamma- (Lindane) in Sediment (Fresh Water)

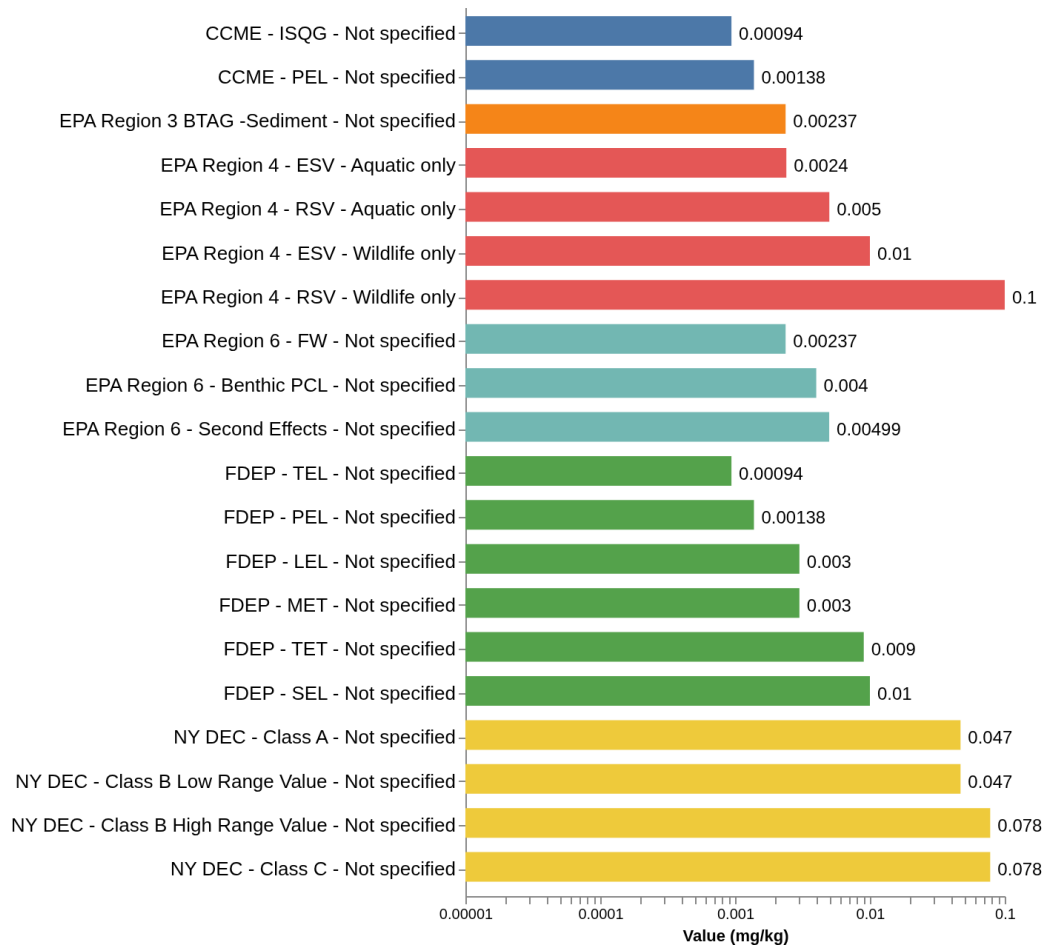
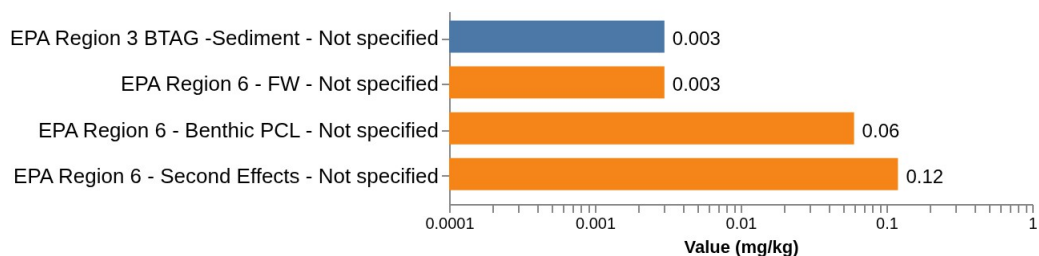


Table 154: Benchmark Values for Hexachlorocyclohexane, Technical in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
608-73-1	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.003	
608-73-1	EPA Region 6	Sediment Freshwater	Not specified	0.003	17
608-73-1	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.060	
608-73-1	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.120	17

Benchmark Values for Hexachlorocyclohexane, Technical in Sediment (Fresh Water)**Table 155: Benchmark Values for Hexachlorocyclopentadiene in Sediment (Fresh Water)**

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
77-47-4	EPA Region 4	Sediment ESV	Aquatic only	0.0065	7
77-47-4	EPA Region 4	Sediment ESV	Wildlife only	0.0690	7
77-47-4	EPA Region 4	Freshwater Refinement Screening Value	Aquatic only	0.8100	7, 28
77-47-4	EPA Region 6	Sediment Freshwater	Not specified	0.0670	
77-47-4	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.1350	
77-47-4	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.2020	
77-47-4	New York DEC	Freshwater Sediment Class A	Not specified	0.8100	23
77-47-4	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.8100	
77-47-4	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	8.1000	
77-47-4	New York DEC	Freshwater Sediment Class C	Not specified	8.1000	22

Benchmark Values for Hexachlorocyclopentadiene in Sediment (Fresh Water)

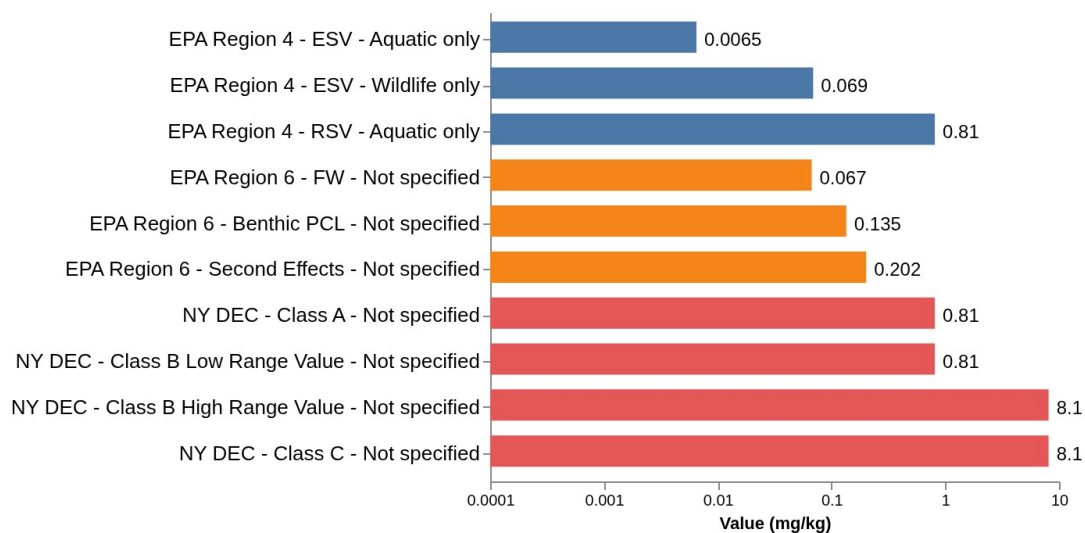


Table 156: Benchmark Values for Hexachloroethane in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
67-72-1	EPA Region 3	BTAG – Freshwater Sediment	Not specified	1.027
67-72-1	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.027
67-72-1	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.075
67-72-1	EPA Region 6	Sediment Freshwater	Not specified	0.225
67-72-1	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	2.100
67-72-1	EPA Region 6	Sediment Freshwater Second Effects	Not specified	3.945

Benchmark Values for Hexachloroethane in Sediment (Fresh Water)

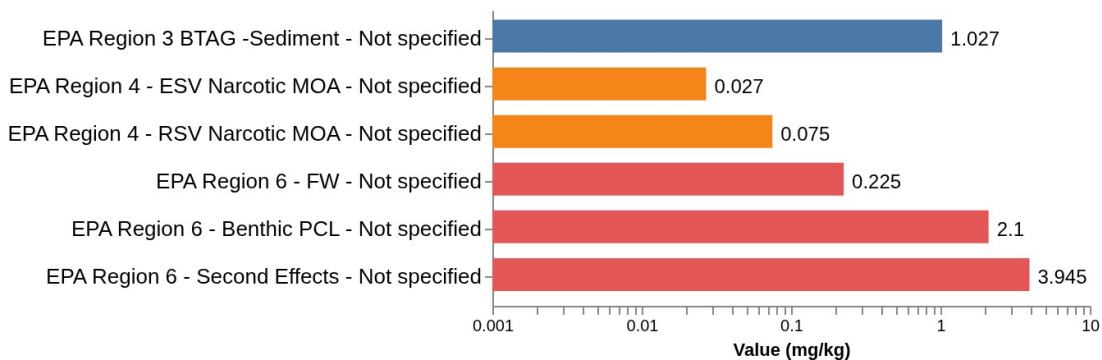


Table 157: Benchmark Values for Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
121-82-4	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.013
121-82-4	EPA Region 4	Sediment ESV	Not specified	0.065
121-82-4	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.312
121-82-4	EPA Region 6	Sediment Freshwater	Not specified	0.230
121-82-4	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.960
121-82-4	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1.690

Benchmark Values for Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) in Sediment (Fresh Water)

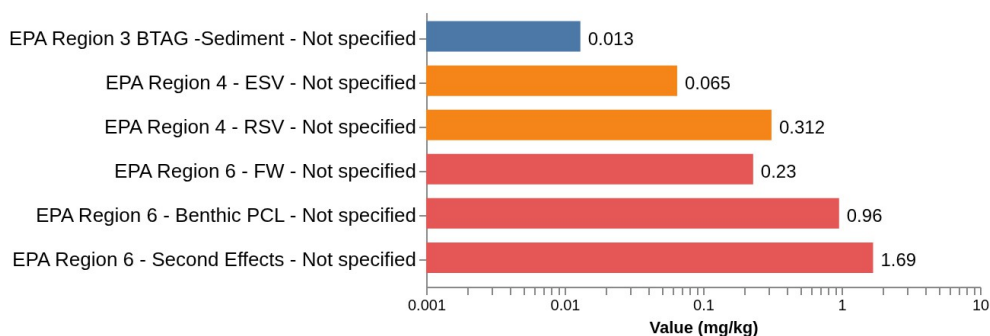


Table 158: Benchmark Values for Hexane, n- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
110-54-3	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.03960
110-54-3	EPA Region 4	Sediment ESV	Not specified	0.00094
110-54-3	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.18600
110-54-3	EPA Region 6	Sediment Freshwater	Not specified	0.00310
110-54-3	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.02700
110-54-3	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.05000

Benchmark Values for Hexane, n- in Sediment (Fresh Water)

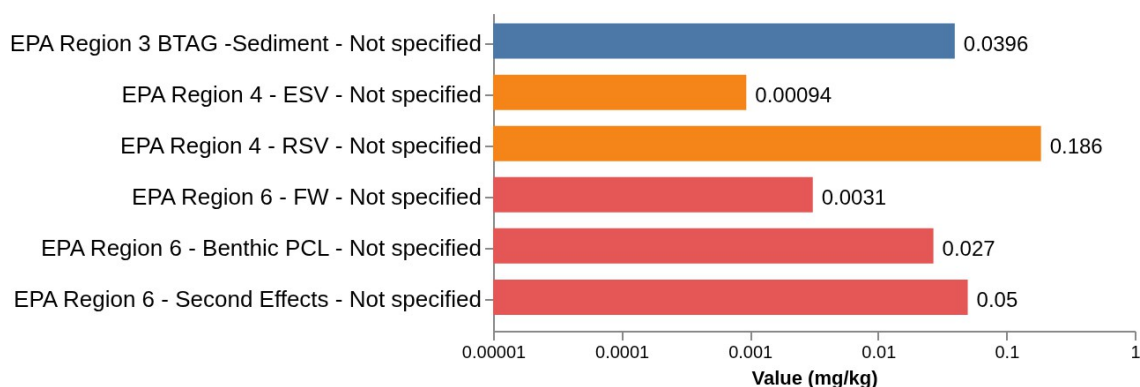


Table 159: Benchmark Values for Hexanone, 2- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
591-78-6	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.045
591-78-6	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	7.598
591-78-6	EPA Region 6	Sediment Freshwater	Not specified	4.700
591-78-6	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	16.450
591-78-6	EPA Region 6	Sediment Freshwater Second Effects	Not specified	28.200

Benchmark Values for Hexanone, 2- in Sediment (Fresh Water)

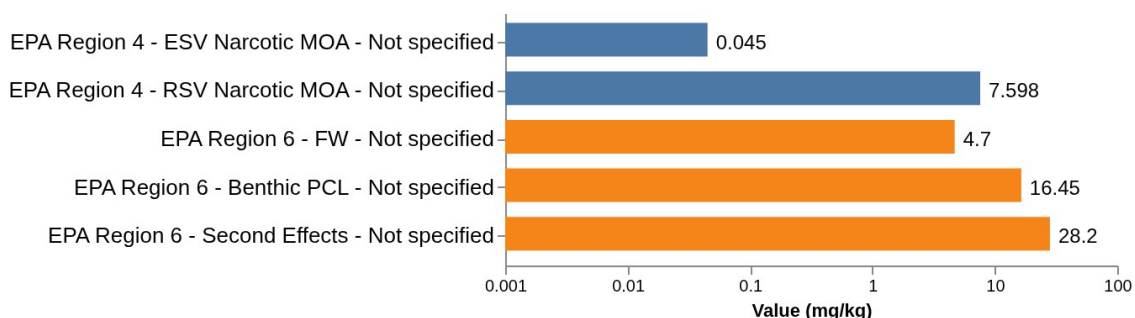


Table 160: Benchmark Values for Hydrazine in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
302-01-2	EPA Region 4	Sediment ESV	Not specified	0.00087

Benchmark Values for Hydrazine in Sediment (Fresh Water)

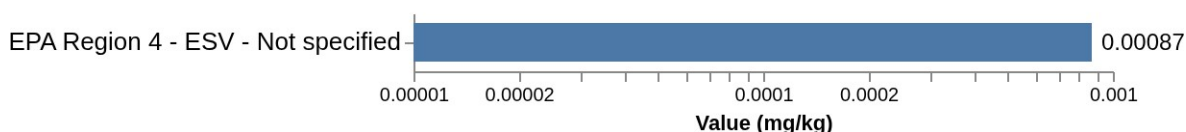


Table 161: Benchmark Values for Hydroquinone in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
123-31-9	EPA Region 4	Sediment ESV	Not specified	0.0015
123-31-9	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.0082

Benchmark Values for Hydroquinone in Sediment (Fresh Water)

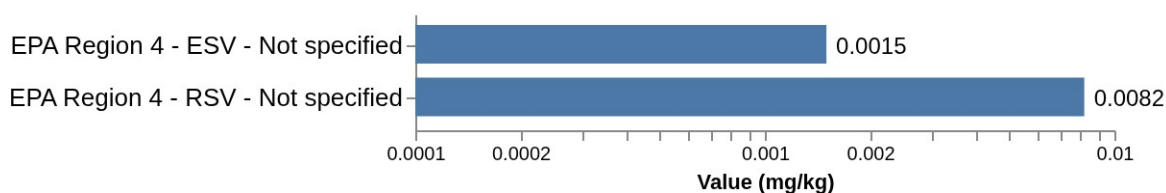


Table 162: Benchmark Values for Indeno[1,2,3-cd]pyrene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
193-39-5	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.017	7, 28
193-39-5	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.200	
193-39-5	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	11.200	

Benchmark Values for Indeno[1,2,3-cd]pyrene in Sediment (Fresh Water)

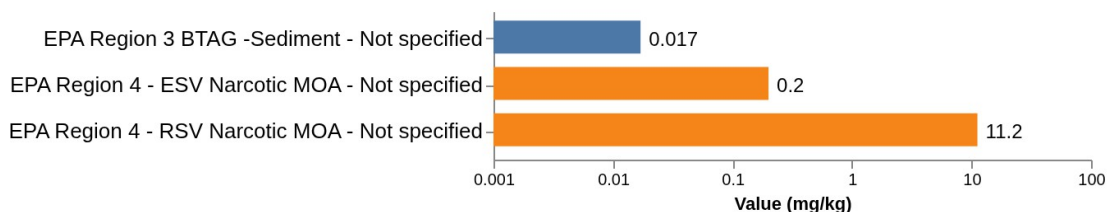


Table 163: Benchmark Values for Iron in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
7439-89-6	British Columbia	Freshwater Sediment LTC – No Effect	Not specified	21200.0
7439-89-6	British Columbia	Freshwater Sediment LTC – Probable Effect	Not specified	43766.0
7439-89-6	EPA Region 3	BTAG – Freshwater Sediment	Not specified	20000.0
7439-89-6	EPA Region 4	Sediment ESV	Not specified	20000.0
7439-89-6	EPA Region 4	Freshwater Refinement Screening Value	Not specified	40000.0
7439-89-6	EPA Region 6	Sediment Freshwater	Not specified	20000.0
7439-89-6	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	30000.0
7439-89-6	EPA Region 6	Sediment Freshwater Second Effects	Not specified	40000.0

Benchmark Values for Iron in Sediment (Fresh Water)

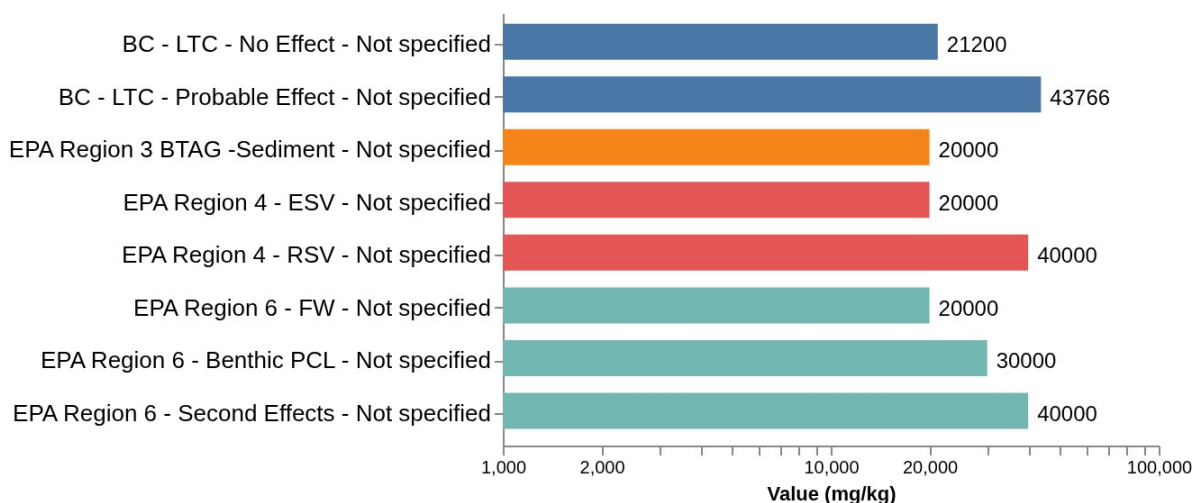


Table 164: Benchmark Values for Isodecyl diphenyl phosphate in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
29761-21-5	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.089

Benchmark Values for Isodecyl diphenyl phosphate in Sediment (Fresh Water)



Table 165: Benchmark Values for Isophorone in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
78-59-1	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.876
78-59-1	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.948

Benchmark Values for Isophorone in Sediment (Fresh Water)

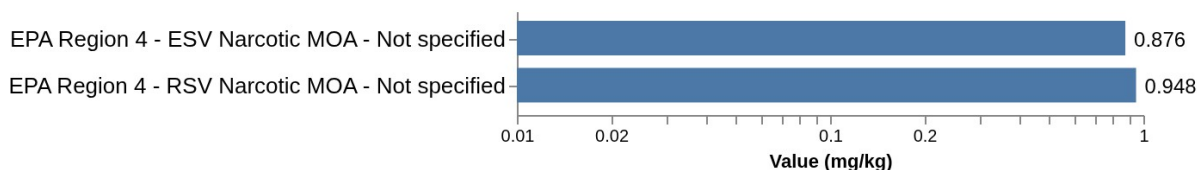


Table 166: Benchmark Values for Isopropanol in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
67-63-0	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.0024
67-63-0	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	16.7000
67-63-0	EPA Region 6	Sediment Freshwater	Not specified	0.0047
67-63-0	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.0420
67-63-0	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.0800

Benchmark Values for Isopropanol in Sediment (Fresh Water)

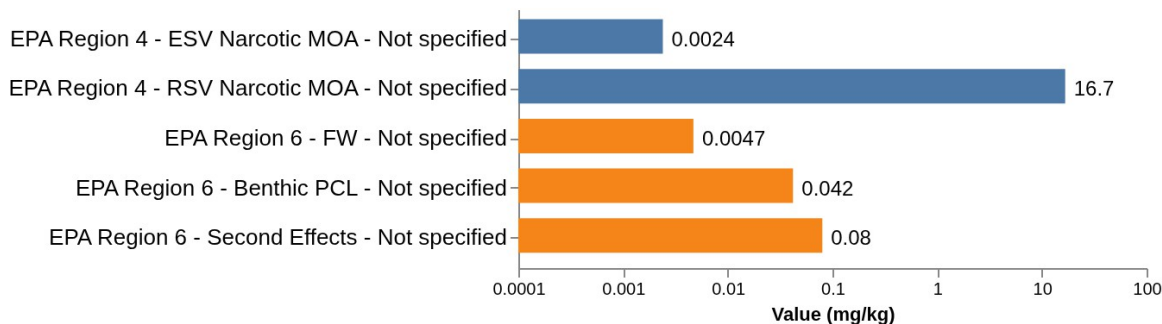


Table 167: Benchmark Values for Isopropyltoluene, p- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
99-87-6	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.184
99-87-6	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.242
99-87-6	EPA Region 6	Sediment Freshwater	Not specified	1.000
99-87-6	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	3.490
99-87-6	EPA Region 6	Sediment Freshwater Second Effects	Not specified	5.980

Benchmark Values for Isopropyltoluene, p- in Sediment (Fresh Water)

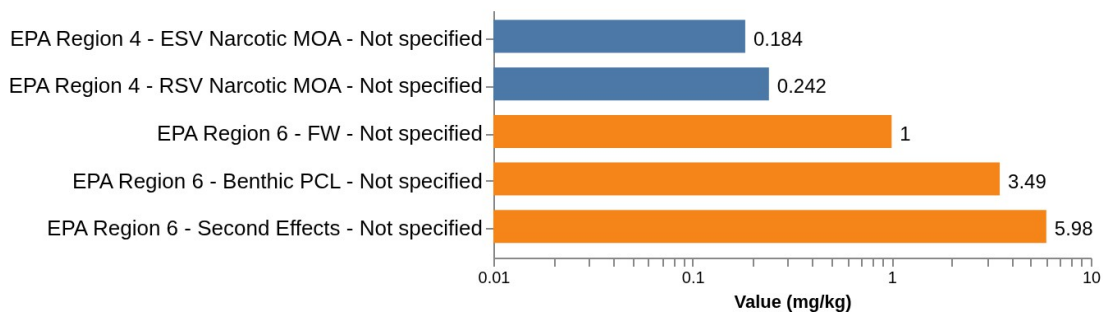


Table 168: Benchmark Values for Lead and Compounds in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
7439-92-1	Canada	Sediment Freshwater ISQG	Not specified	35.0	
7439-92-1	Canada	Sediment Freshwater PEL	Not specified	91.3	
7439-92-1	EPA Region 3	BTAG – Freshwater Sediment	Not specified	35.8	
7439-92-1	EPA Region 4	Sediment ESV	Not specified	35.8	
7439-92-1	EPA Region 4	Freshwater Refinement Screening Value	Not specified	128.0	
7439-92-1	EPA Region 6	Sediment Freshwater	Not specified	35.8	
7439-92-1	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	81.9	
7439-92-1	EPA Region 6	Sediment Freshwater Second Effects	Not specified	128.0	
7439-92-1	Florida	Freshwater LEL	Not specified	31.0	
7439-92-1	Florida	Freshwater TEL	Not specified	35.0	
7439-92-1	Florida	Freshwater ERL	Not specified	35.0	
7439-92-1	Florida	Freshwater MET	Not specified	42.0	
7439-92-1	Florida	Freshwater PEL	Not specified	91.3	
7439-92-1	Florida	Freshwater ERM	Not specified	110.0	
7439-92-1	Florida	Freshwater TET	Not specified	170.0	
7439-92-1	Florida	Freshwater SEL	Not specified	250.0	
7439-92-1	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	36.0	
7439-92-1	New York DEC	Freshwater Sediment Class A	Not specified	36.0	23
7439-92-1	New York DEC	Freshwater Sediment Class C	Not specified	130.0	22
7439-92-1	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	130.0	
7439-92-1	Washington	Freshwater Sediment Cleanup Objective	Not specified	360.0	
7439-92-1	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	1300.0	22

Benchmark Values for Lead and Compounds in Sediment (Fresh Water)

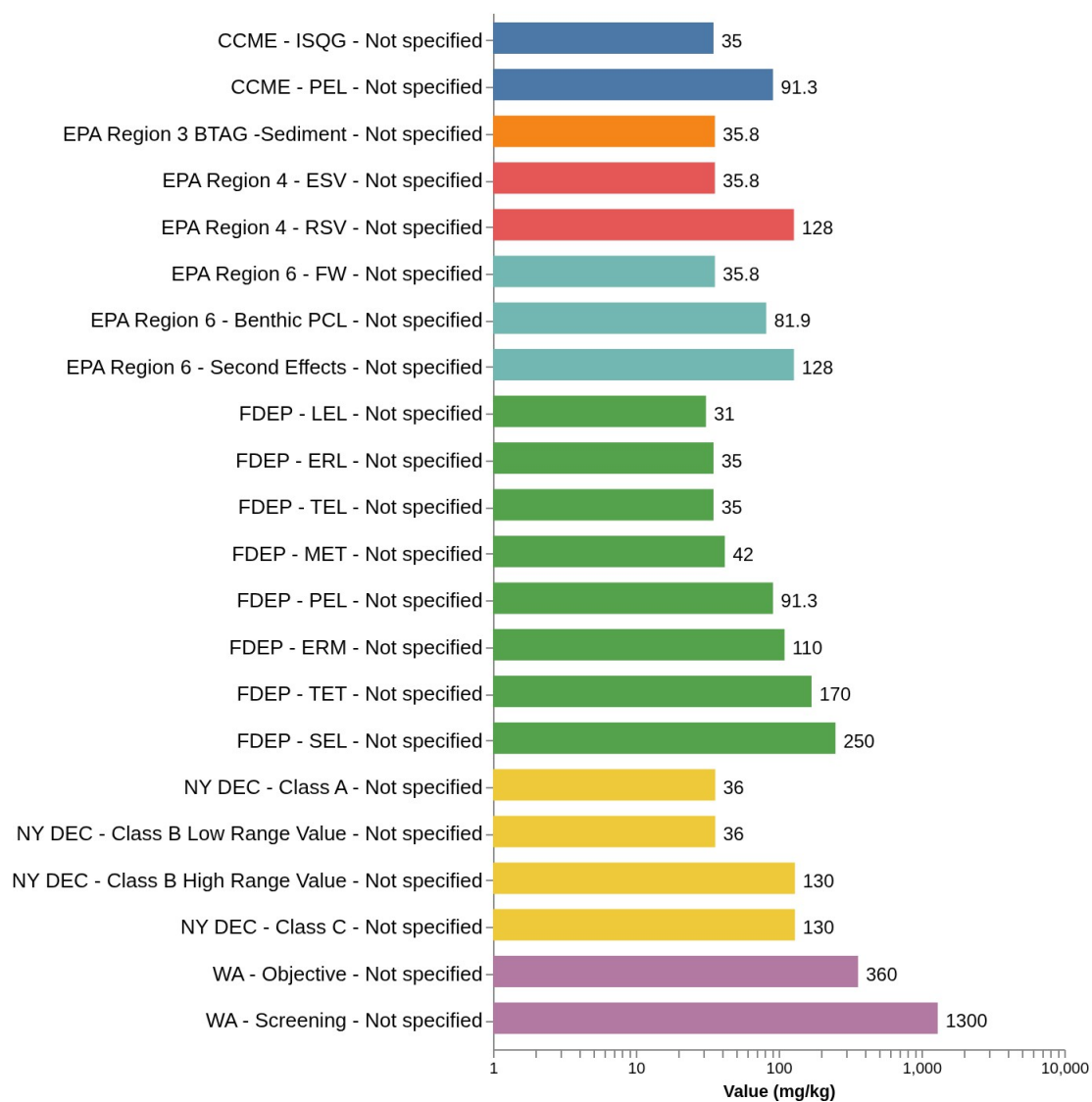


Table 169: Benchmark Values for Malathion in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
121-75-5	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.000203	28
121-75-5	EPA Region 4	Sediment ESV	Not specified	0.000670	
121-75-5	EPA Region 6	Sediment Freshwater	Not specified	0.000670	
121-75-5	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.003000	
121-75-5	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.006200	
121-75-5	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.000420	22
121-75-5	New York DEC	Freshwater Sediment Class A	Not specified	0.000420	23

Benchmark Values for Malathion in Sediment (Fresh Water)

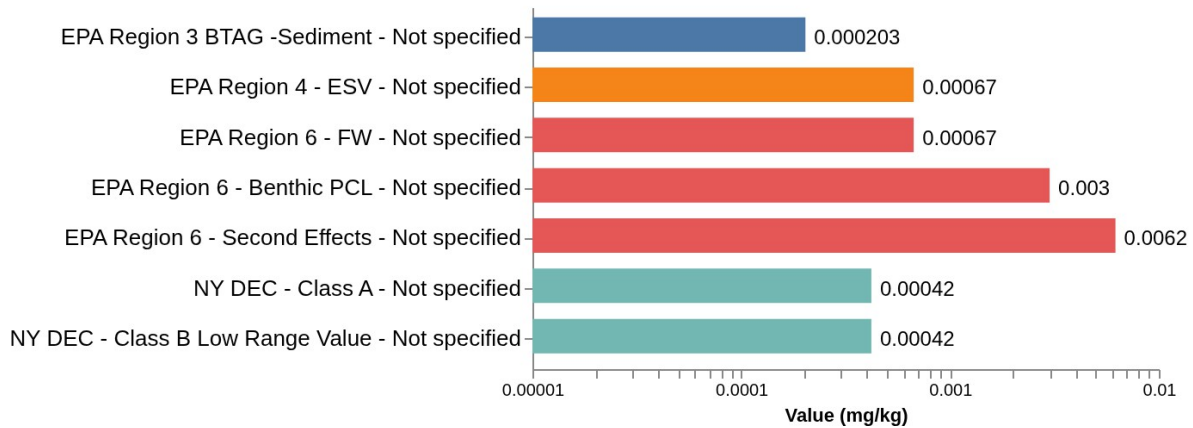


Table 170: Benchmark Values for Manganese (Diet) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
7439-96-5	British Columbia	Freshwater Sediment LTC – No Effect	Not specified	460.0
7439-96-5	British Columbia	Freshwater Sediment LTC – Probable Effect	Not specified	1100.0
7439-96-5	EPA Region 3	BTAG – Freshwater Sediment	Not specified	460.0
7439-96-5	EPA Region 4	Sediment ESV	Not specified	460.0
7439-96-5	EPA Region 4	Freshwater Refinement Screening Value	Not specified	1100.0
7439-96-5	EPA Region 6	Sediment Freshwater	Not specified	460.0
7439-96-5	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	780.0
7439-96-5	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1100.0

Benchmark Values for Manganese (Diet) in Sediment (Fresh Water)

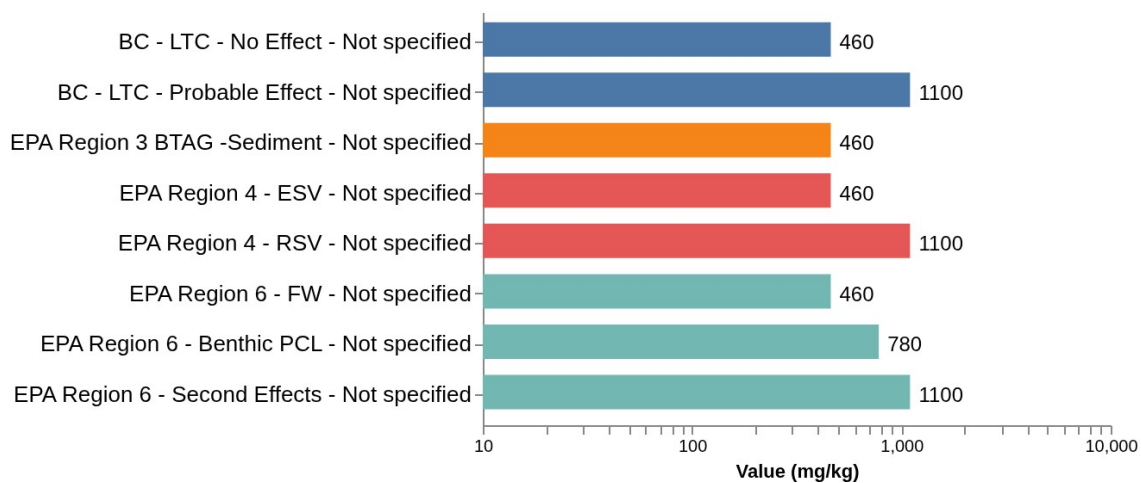


Table 171: Benchmark Values for Mercury (elemental) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
7439-97-6	Canada	Sediment Freshwater ISQG	Not specified	0.170	
7439-97-6	Canada	Sediment Freshwater PEL	Not specified	0.486	
7439-97-6	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.180	
7439-97-6	EPA Region 4	Freshwater Refinement Screening Value	Wildlife only	0.170	7
7439-97-6	EPA Region 4	Sediment ESV	Wildlife only	0.170	7
7439-97-6	EPA Region 4	Sediment ESV	Aquatic only	0.180	7
7439-97-6	EPA Region 4	Freshwater Refinement Screening Value	Aquatic only	1.100	7
7439-97-6	EPA Region 6	Sediment Freshwater	Not specified	0.180	
7439-97-6	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.620	
7439-97-6	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1.060	
7439-97-6	Florida	Freshwater ERL	Not specified	0.150	
7439-97-6	Florida	Freshwater TEL	Not specified	0.174	
7439-97-6	Florida	Freshwater MET	Not specified	0.200	
7439-97-6	Florida	Freshwater LEL	Not specified	0.200	
7439-97-6	Florida	Freshwater PEL	Not specified	0.486	
7439-97-6	Florida	Freshwater TET	Not specified	1.000	
7439-97-6	Florida	Freshwater ERM	Not specified	1.300	
7439-97-6	Florida	Freshwater SEL	Not specified	2.000	
7439-97-6	New York DEC	Freshwater Sediment Class A	Not specified	0.200	23
7439-97-6	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.200	
7439-97-6	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	1.000	
7439-97-6	New York DEC	Freshwater Sediment Class C	Not specified	1.000	22
7439-97-6	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.660	
7439-97-6	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	0.800	

Benchmark Values for Mercury (elemental) in Sediment (Fresh Water)

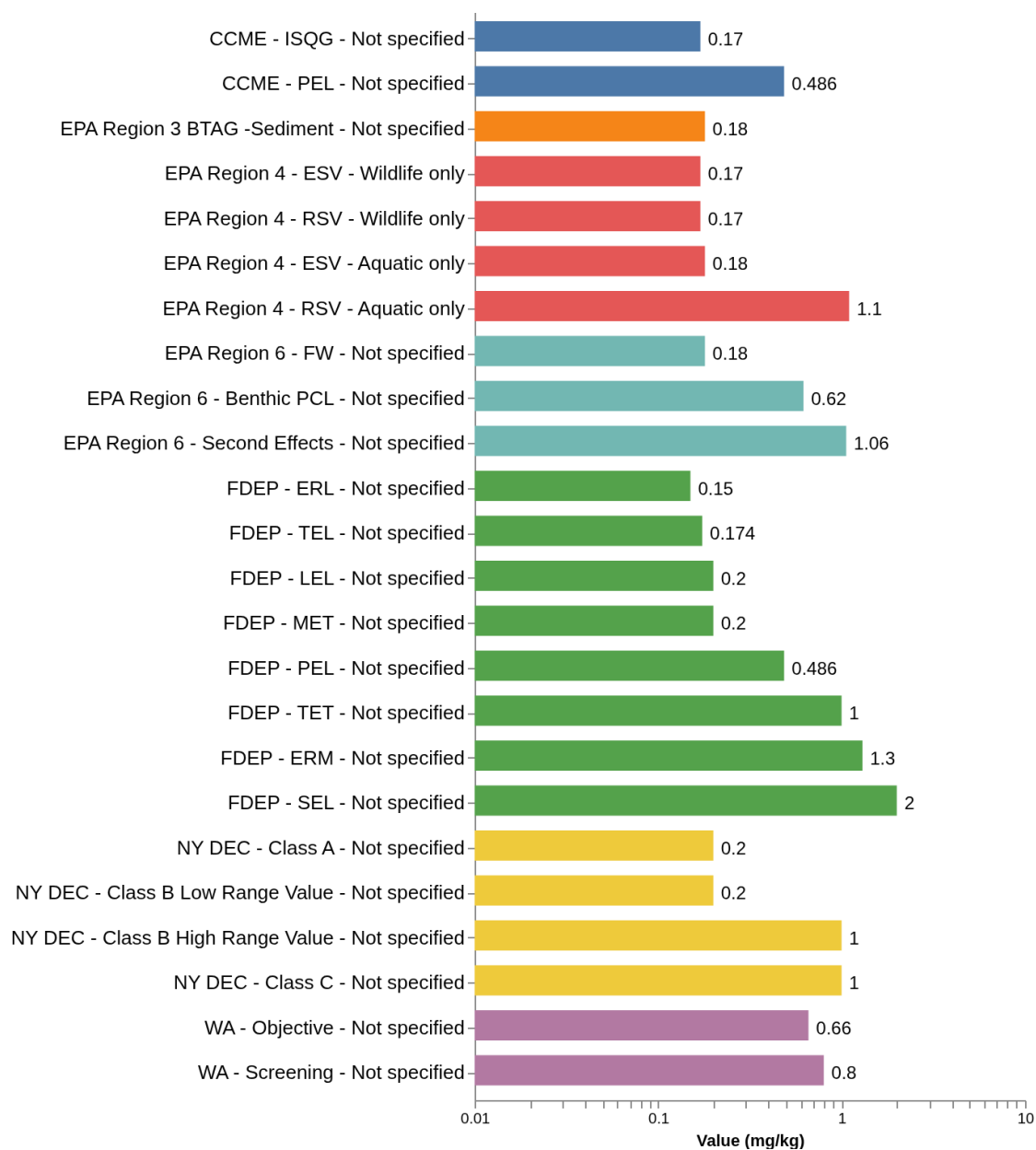


Table 172: Benchmark Values for Methanol in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
67-56-1	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.102
67-56-1	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	34.983

Benchmark Values for Methanol in Sediment (Fresh Water)

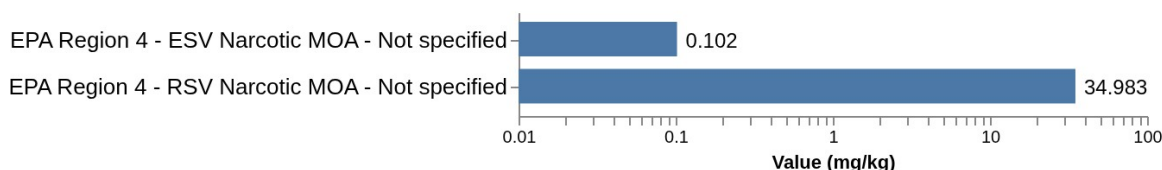


Table 173: Benchmark Values for Methoxychlor in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
72-43-5	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0187	
72-43-5	EPA Region 4	Sediment ESV	Aquatic and wildlife	0.0300	7, 28
72-43-5	EPA Region 4	Freshwater Refinement Screening Value	Aquatic and wildlife	0.0590	7, 28
72-43-5	EPA Region 6	Sediment Freshwater	Not specified	0.0190	
72-43-5	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.0570	
72-43-5	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.0950	
72-43-5	New York DEC	Freshwater Sediment Class A	Not specified	0.0590	23
72-43-5	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.0590	22

Benchmark Values for Methoxychlor in Sediment (Fresh Water)

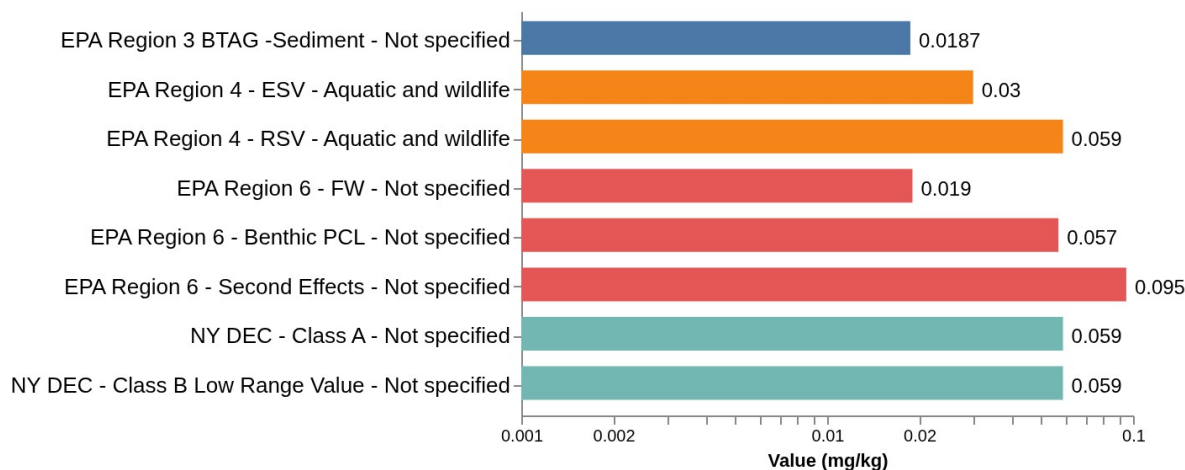


Table 174: Benchmark Values for Methyl Ethyl Ketone (2-Butanone) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
78-93-3	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	7.604
78-93-3	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	22.707
78-93-3	EPA Region 6	Sediment Freshwater	Not specified	25.710
78-93-3	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	89.990
78-93-3	EPA Region 6	Sediment Freshwater Second Effects	Not specified	154.260

Benchmark Values for Methyl Ethyl Ketone (2-Butanone) in Sediment (Fresh Water)

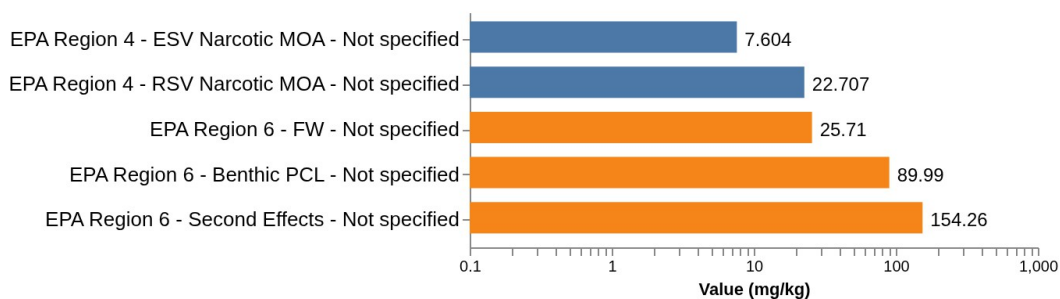


Table 175: Benchmark Values for Methyl Isobutyl Ketone (4-methyl-2-pentanone) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
108-10-1	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.073
108-10-1	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	8.165
108-10-1	EPA Region 6	Sediment Freshwater	Not specified	19.430
108-10-1	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	68.010
108-10-1	EPA Region 6	Sediment Freshwater Second Effects	Not specified	116.590

Benchmark Values for Methyl Isobutyl Ketone (4-methyl-2-pentanone) in Sediment (Fresh Water)

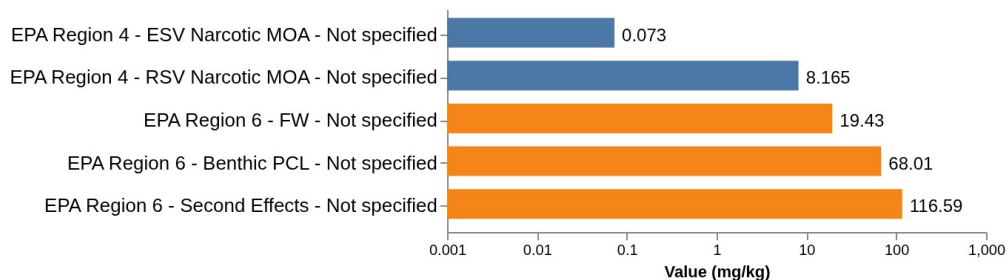
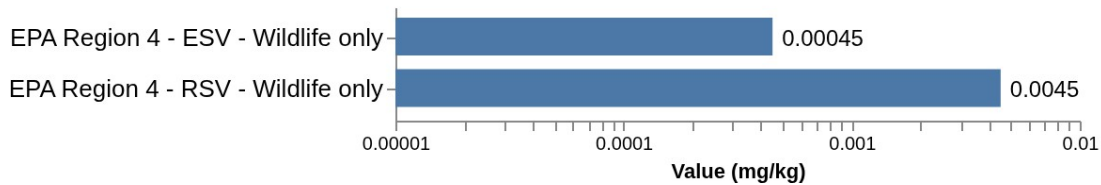
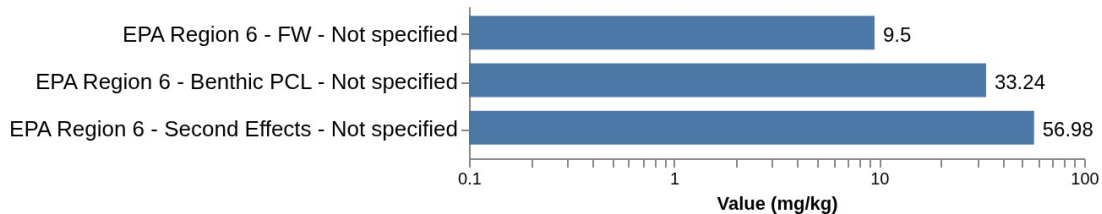


Table 176: Benchmark Values for Methyl Mercury in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
22967-92-6	EPA Region 4	Sediment ESV	Wildlife only	0.00045	7
22967-92-6	EPA Region 4	Freshwater Refinement Screening Value	Wildlife only	0.00450	7

Benchmark Values for Methyl Mercury in Sediment (Fresh Water)**Table 177: Benchmark Values for Methyl Methacrylate in Sediment (Fresh Water)**

CAS	Source	Benchmark	Organism	Value (mg/kg)
80-62-6	EPA Region 6	Sediment Freshwater	Not specified	9.50
80-62-6	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	33.24
80-62-6	EPA Region 6	Sediment Freshwater Second Effects	Not specified	56.98

Benchmark Values for Methyl Methacrylate in Sediment (Fresh Water)**Table 178: Benchmark Values for Methyl tert-Butyl Ether (MTBE) in Sediment (Fresh Water)**

CAS	Source	Benchmark	Organism	Value (mg/kg)
1634-04-4	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.304
1634-04-4	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	4.433

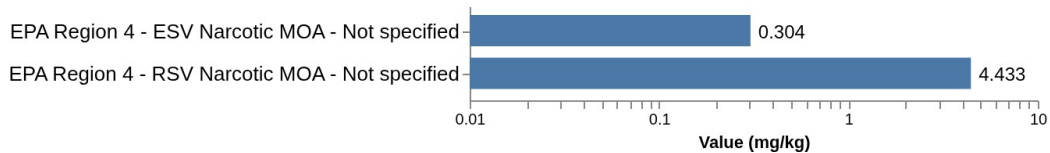
Benchmark Values for Methyl tert-Butyl Ether (MTBE) in Sediment (Fresh Water)

Table 179: Benchmark Values for Methylamine in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
74-89-5	EPA Region 4	Sediment ESV	Not specified	0.292
74-89-5	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.586

Benchmark Values for Methylamine in Sediment (Fresh Water)

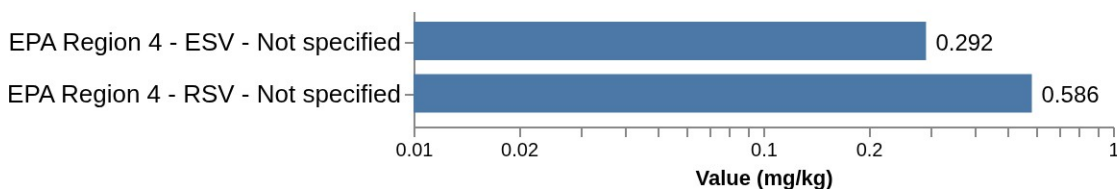


Table 180: Benchmark Values for Methylene Chloride in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
75-09-2	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.018	28
75-09-2	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	2.404	
75-09-2	EPA Region 6	Sediment Freshwater	Not specified	15.510	
75-09-2	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	31.020	
75-09-2	EPA Region 6	Sediment Freshwater Second Effects	Not specified	46.520	

Benchmark Values for Methylene Chloride in Sediment (Fresh Water)

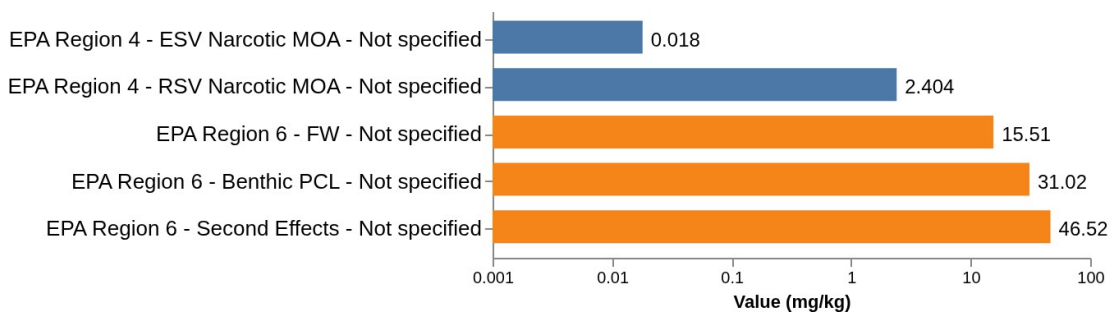


Table 181: Benchmark Values for Methylnaphthalene, 1- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
90-12-0	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.141
90-12-0	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	4.460

Benchmark Values for Methylnaphthalene, 1- in Sediment (Fresh Water)

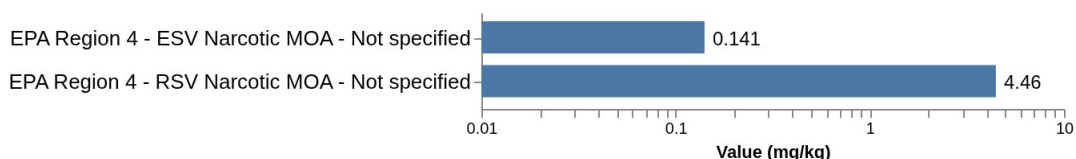


Table 182: Benchmark Values for Methylnaphthalene, 2- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
91-57-6	Canada	Sediment Freshwater ISQG	Not specified	0.0202	
91-57-6	Canada	Sediment Freshwater PEL	Not specified	0.2010	
91-57-6	EPA Region 3	BTAG - Freshwater Sediment	Not specified	0.0202	
91-57-6	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.0202	28
91-57-6	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	4.4700	
91-57-6	EPA Region 6	Sediment Freshwater	Not specified	0.0202	
91-57-6	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.1100	
91-57-6	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.2010	

Benchmark Values for Methylnaphthalene, 2- in Sediment (Fresh Water)

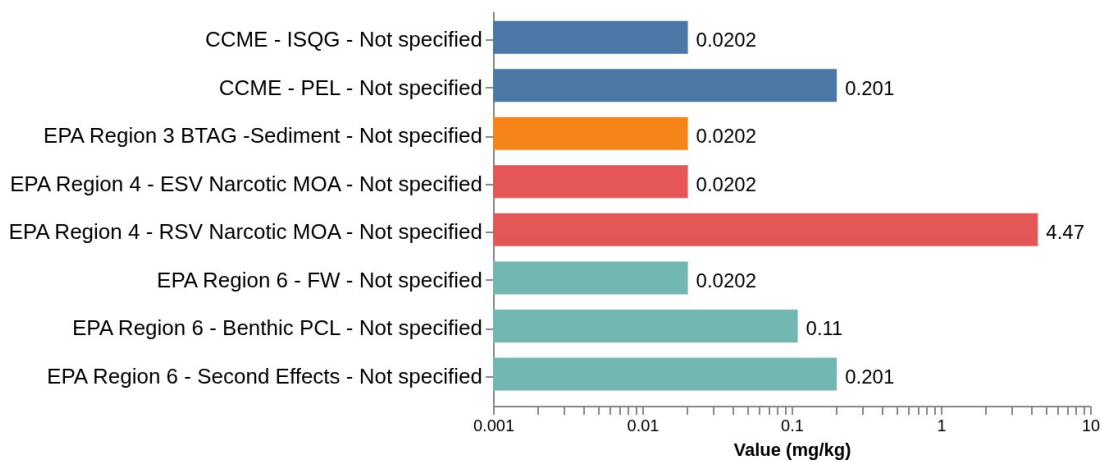


Table 183: Benchmark Values for Metolachlor in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
51218-45-2	EPA Region 4	Sediment ESV	Not specified	0.022	
51218-45-2	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.240	28
51218-45-2	New York DEC	Freshwater Sediment Class A	Not specified	0.240	23
51218-45-2	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.240	
51218-45-2	New York DEC	Freshwater Sediment Class C	Not specified	3.300	22
51218-45-2	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	3.300	

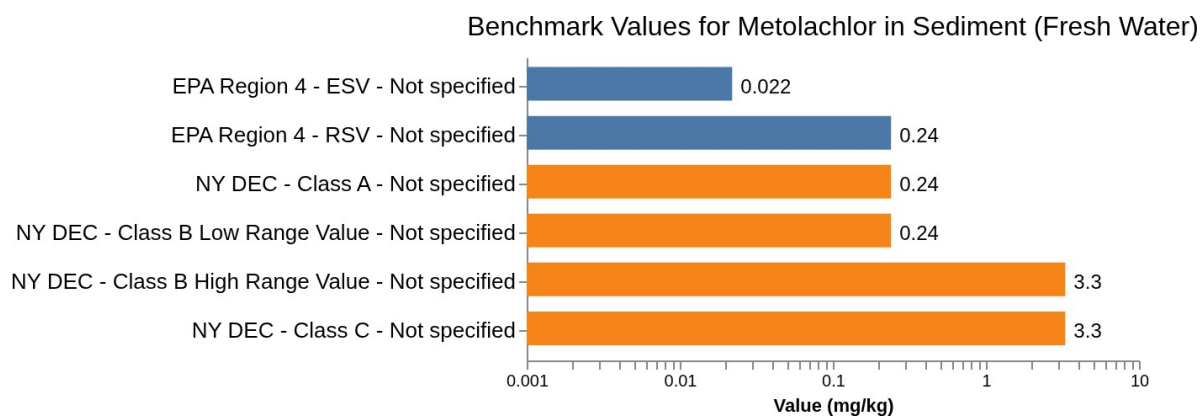


Table 184: Benchmark Values for Mirex in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
2385-85-5	British Columbia	Freshwater Sediment LTC – No Effect	Not specified	0.0071	
2385-85-5	British Columbia	Freshwater Sediment LTC – Probable Effect	Not specified	1.3100	
2385-85-5	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0070	
2385-85-5	EPA Region 4	Sediment ESV	Aquatic only	0.0036	7
2385-85-5	EPA Region 4	Sediment ESV	Wildlife only	0.0370	7, 28
2385-85-5	EPA Region 4	Freshwater Refinement Screening Value	Aquatic only	0.1200	7, 28
2385-85-5	EPA Region 6	Sediment Freshwater	Not specified	0.0070	
2385-85-5	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.6500	
2385-85-5	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1.3000	
2385-85-5	New York DEC	Freshwater Sediment Class A	Not specified	0.1200	23
2385-85-5	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.1200	22

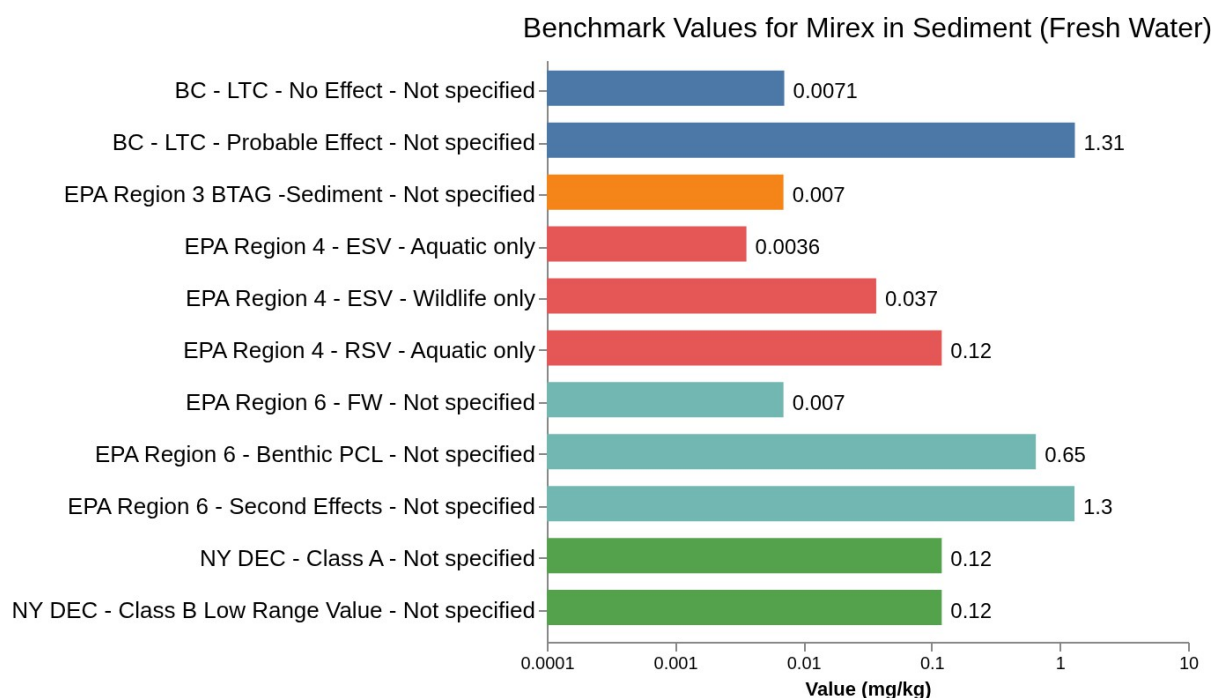


Table 185: Benchmark Values for Monobutyltin Compounds in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
000000-01-8	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.54	
000000-01-8	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	4.80	22

Benchmark Values for Monobutyltin Compounds in Sediment (Fresh Water)

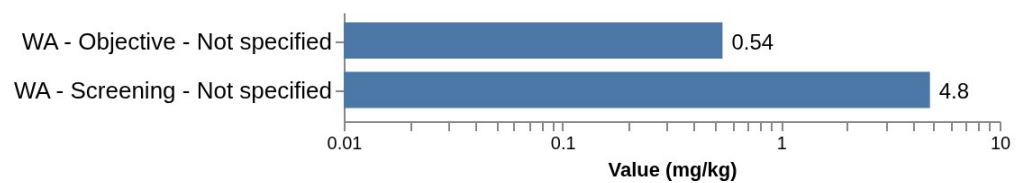


Table 186: Benchmark Values for Naphthalene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
91-20-3	Canada	Sediment Freshwater ISQG	Not specified	0.0346	
91-20-3	Canada	Sediment Freshwater PEL	Not specified	0.3910	
91-20-3	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.1760	
91-20-3	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.1760	28
91-20-3	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	3.8500	
91-20-3	EPA Region 6	Sediment Freshwater	Not specified	0.1760	
91-20-3	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.3700	
91-20-3	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.5610	
91-20-3	Florida	Freshwater ERL	Not specified	0.3400	
91-20-3	Florida	Freshwater TET	Not specified	0.6000	
91-20-3	Florida	Freshwater ERM	Not specified	2.1000	

Benchmark Values for Naphthalene in Sediment (Fresh Water)

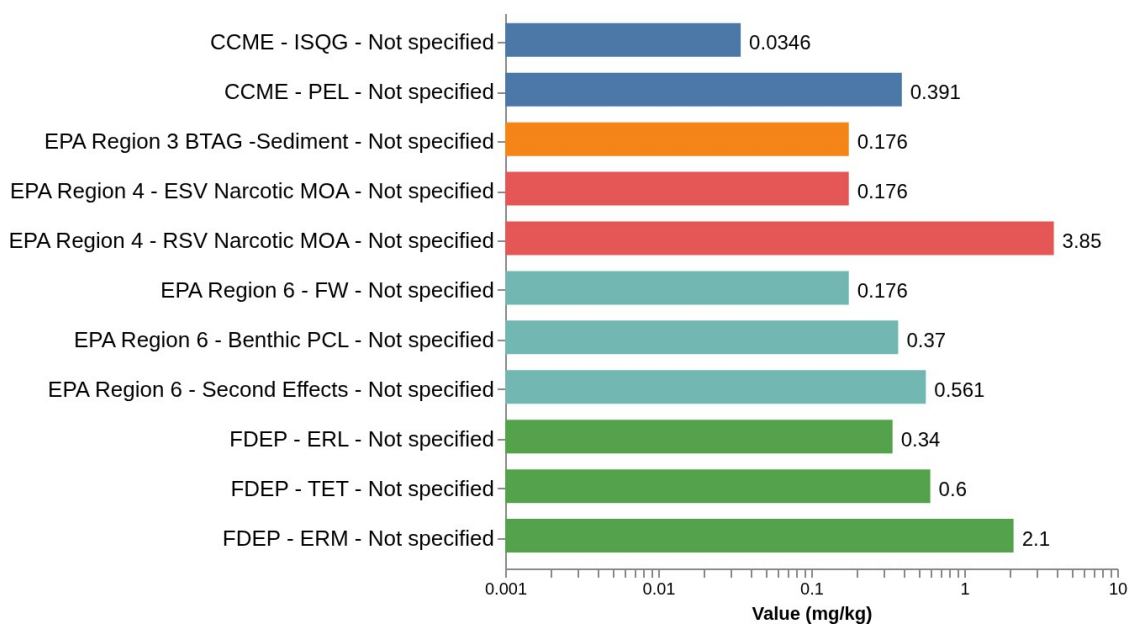


Table 187: Benchmark Values for Nickel Soluble Salts in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
7440-02-0	British Columbia	Freshwater Sediment LTC – No Effect	Not specified	16.00	
7440-02-0	British Columbia	Freshwater Sediment LTC – Probable Effect	Not specified	75.00	
7440-02-0	EPA Region 3	BTAG – Freshwater Sediment	Not specified	22.70	
7440-02-0	EPA Region 4	Sediment ESV	Not specified	22.70	
7440-02-0	EPA Region 4	Freshwater Refinement Screening Value	Not specified	48.60	
7440-02-0	EPA Region 6	Sediment Freshwater	Not specified	22.70	
7440-02-0	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	35.65	
7440-02-0	EPA Region 6	Sediment Freshwater Second Effects	Not specified	48.60	
7440-02-0	Florida	Freshwater LEL	Not specified	16.00	
7440-02-0	Florida	Freshwater TEL	Not specified	18.00	
7440-02-0	Florida	Freshwater ERL	Not specified	30.00	
7440-02-0	Florida	Freshwater MET	Not specified	35.00	
7440-02-0	Florida	Freshwater PEL	Not specified	36.00	
7440-02-0	Florida	Freshwater ERM	Not specified	50.00	
7440-02-0	Florida	Freshwater TET	Not specified	61.00	
7440-02-0	Florida	Freshwater SEL	Not specified	75.00	
7440-02-0	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	23.00	
7440-02-0	New York DEC	Freshwater Sediment Class A	Not specified	23.00	23
7440-02-0	New York DEC	Freshwater Sediment Class C	Not specified	49.00	22
7440-02-0	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	49.00	
7440-02-0	Washington	Freshwater Sediment Cleanup Objective	Not specified	26.00	
7440-02-0	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	110.00	

Benchmark Values for Nickel Soluble Salts in Sediment (Fresh Water)

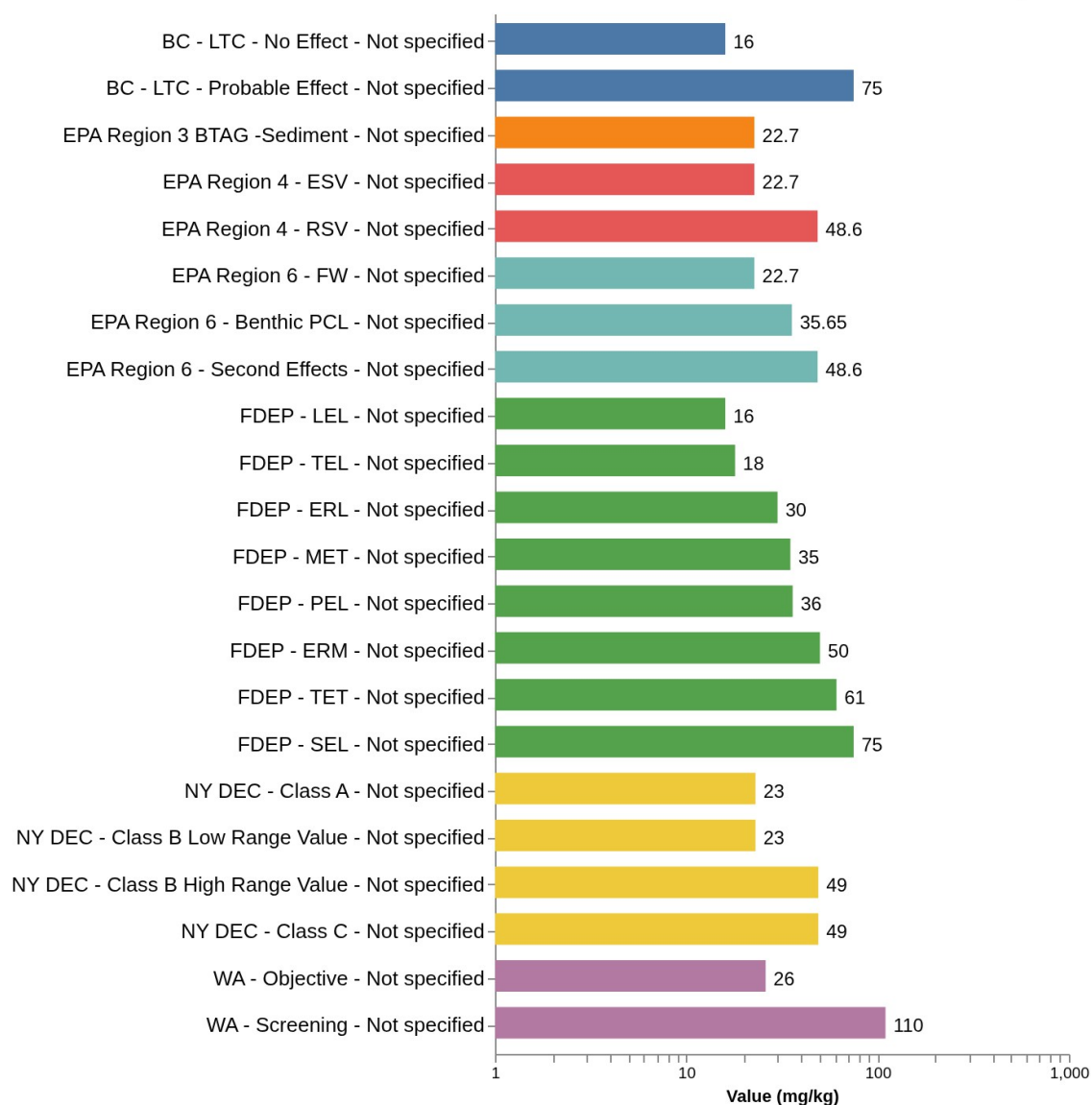


Table 188: Benchmark Values for Nitrobenzene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
98-95-3	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.407
98-95-3	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	9.007
98-95-3	EPA Region 6	Sediment Freshwater	Not specified	2.100
98-95-3	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	4.200
98-95-3	EPA Region 6	Sediment Freshwater Second Effects	Not specified	6.290

Benchmark Values for Nitrobenzene in Sediment (Fresh Water)

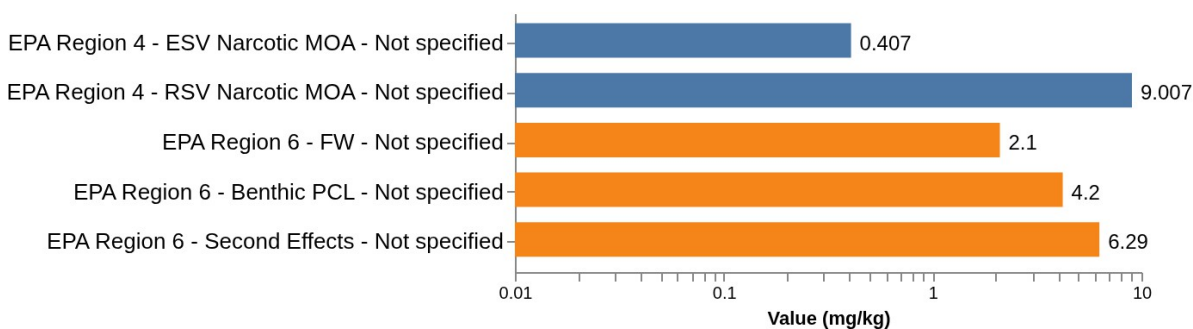


Table 189: Benchmark Values for Nitroglycerin in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
55-63-0	EPA Region 4	Sediment ESV	Not specified	0.010
55-63-0	EPA Region 4	Freshwater Refinement Screening Value	Not specified	12.704
55-63-0	EPA Region 6	Sediment Freshwater	Not specified	0.100
55-63-0	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.360
55-63-0	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.620

Benchmark Values for Nitroglycerin in Sediment (Fresh Water)

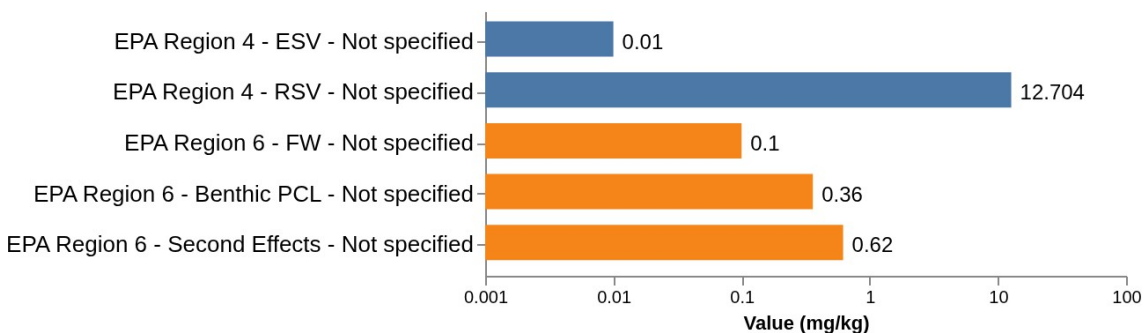


Table 190: Benchmark Values for Nitrophenol, 2- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
88-75-5	EPA Region 4	Sediment ESV	Not specified	0.168
88-75-5	EPA Region 4	Freshwater Refinement Screening Value	Not specified	3.589

Benchmark Values for Nitrophenol, 2- in Sediment (Fresh Water)

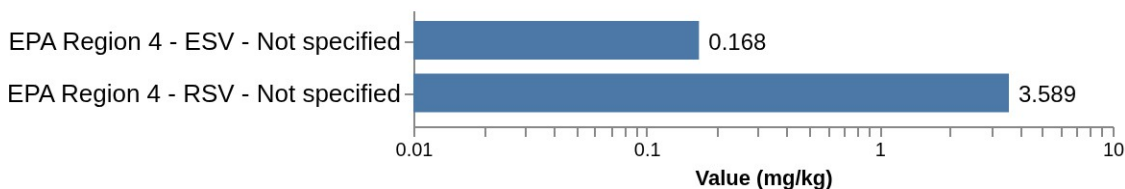


Table 191: Benchmark Values for Nitrophenol, 4- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
100-02-7	EPA Region 4	Sediment ESV	Not specified	0.153
100-02-7	EPA Region 4	Freshwater Refinement Screening Value	Not specified	4.105

Benchmark Values for Nitrophenol, 4- in Sediment (Fresh Water)

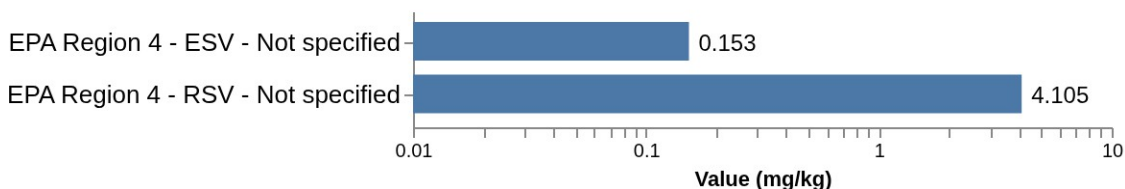


Table 192: Benchmark Values for Nitrosodiphenylamine, N- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
86-30-6	EPA Region 3	BTAG - Freshwater Sediment	Not specified	2.68
86-30-6	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.11
86-30-6	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.37

Benchmark Values for Nitrosodiphenylamine, N- in Sediment (Fresh Water)

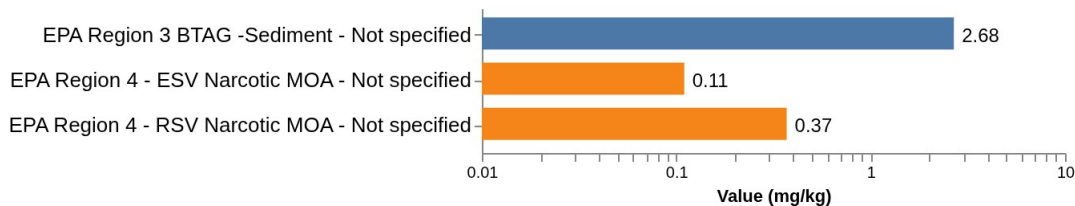


Table 193: Benchmark Values for Nitrotoluene, m- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
99-08-1	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.145
99-08-1	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	5.995
99-08-1	EPA Region 6	Sediment Freshwater	Not specified	0.750
99-08-1	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	2.620
99-08-1	EPA Region 6	Sediment Freshwater Second Effects	Not specified	4.490

Benchmark Values for Nitrotoluene, m- in Sediment (Fresh Water)

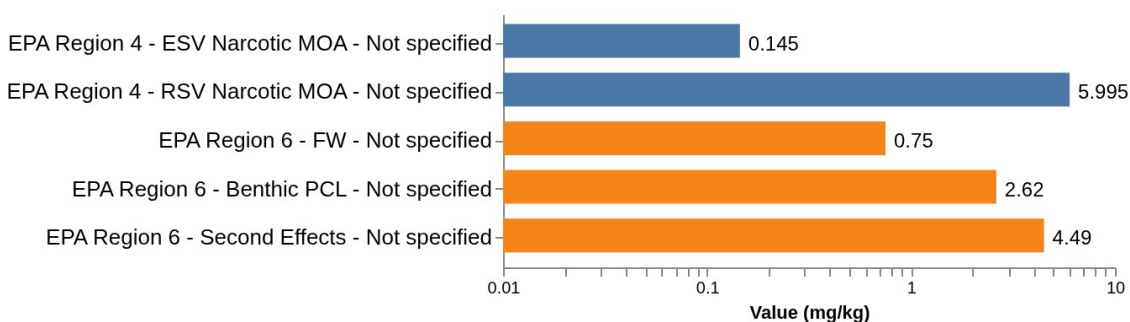


Table 194: Benchmark Values for Nitrotoluene, o- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
88-72-2	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.207
88-72-2	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	5.042

Benchmark Values for Nitrotoluene, o- in Sediment (Fresh Water)

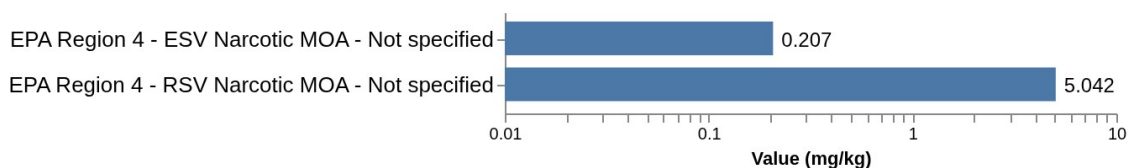


Table 195: Benchmark Values for Nitrotoluene, p- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
99-99-0	EPA Region 3	BTAG – Freshwater Sediment	Not specified	4.060
99-99-0	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.145
99-99-0	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	5.465

Benchmark Values for Nitrotoluene, p- in Sediment (Fresh Water)

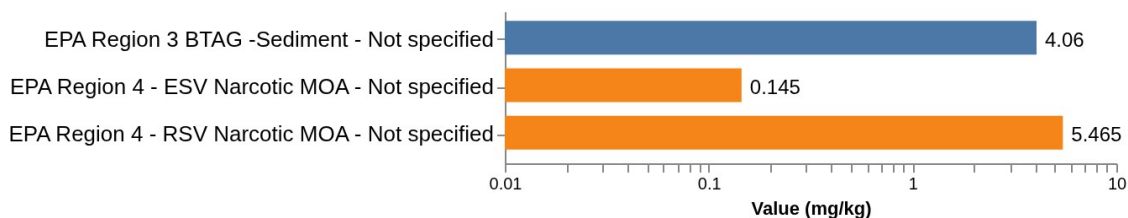


Table 196: Benchmark Values for Nonylphenol (branched) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
84852-15-3	Canada	Sediment Freshwater ISQG	Not specified	1.4

Benchmark Values for Nonylphenol (branched) in Sediment (Fresh Water)

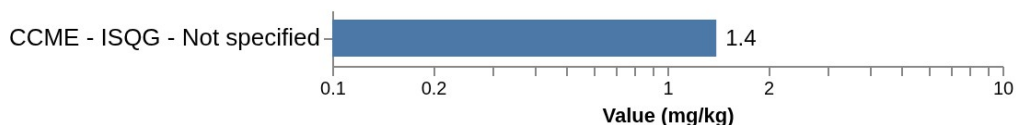


Table 197: Benchmark Values for Nonylphenol in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
25154-52-3	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.203	
25154-52-3	EPA Region 6	Sediment Freshwater	Not specified	1.400	
25154-52-3	New York DEC	Freshwater Sediment Class A	Not specified	54.000	23
25154-52-3	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	54.000	
25154-52-3	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	230.000	
25154-52-3	New York DEC	Freshwater Sediment Class C	Not specified	230.000	22

Benchmark Values for Nonylphenol in Sediment (Fresh Water)

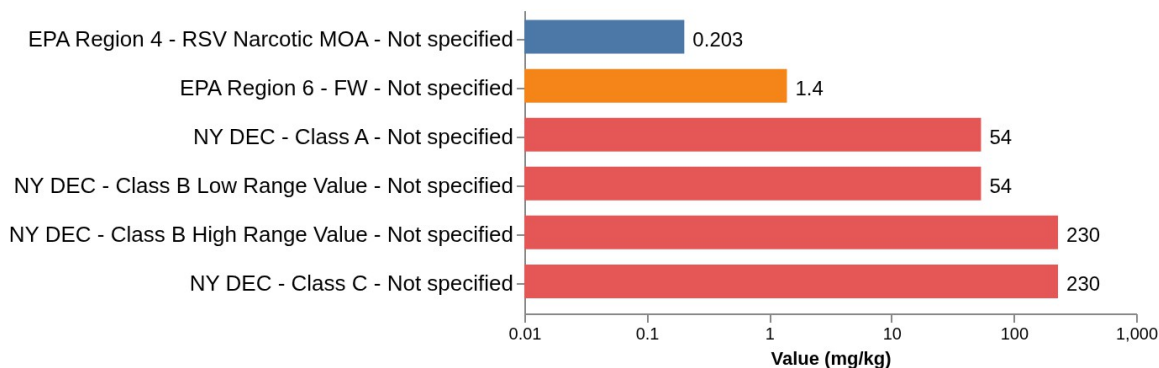


Table 198: Benchmark Values for Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
2691-41-0	EPA Region 4	Sediment ESV	Not specified	0.108
2691-41-0	EPA Region 4	Freshwater Refinement Screening Value	Not specified	64.709
2691-41-0	EPA Region 6	Sediment Freshwater	Not specified	0.190
2691-41-0	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	1.200
2691-41-0	EPA Region 6	Sediment Freshwater Second Effects	Not specified	2.200

Benchmark Values for Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX) in Sediment (Fresh Water)

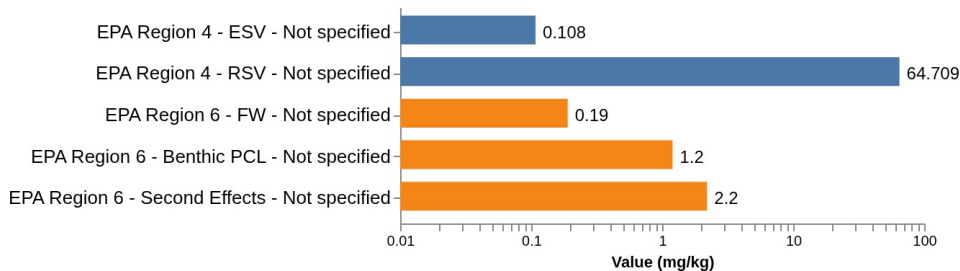


Table 199: Benchmark Values for Octanone, 2- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
111-13-7	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.0066
111-13-7	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	2.2400

Benchmark Values for Octanone, 2- in Sediment (Fresh Water)

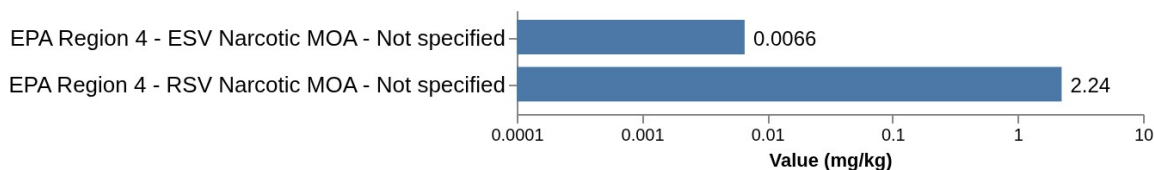


Table 200: Benchmark Values for Octyl Phthalate, di-N- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
117-84-0	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.039	
117-84-0	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	1.100	
117-84-0	EPA Region 6	Sediment Freshwater	Not specified	0.039	
117-84-0	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.600	
117-84-0	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1.100	
117-84-0	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.039	
117-84-0	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	1.100	22

Benchmark Values for Octyl Phthalate, di-N- in Sediment (Fresh Water)

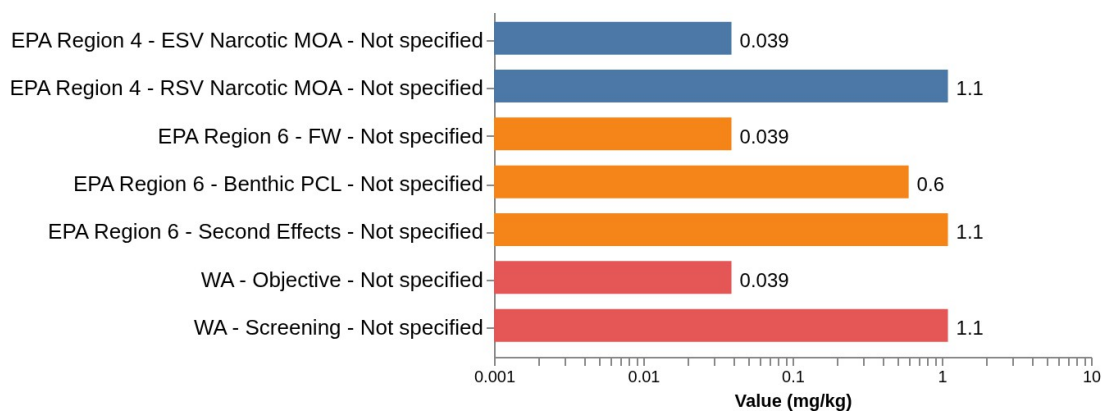


Table 201: Benchmark Values for Parathion in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
56-38-2	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.000757
56-38-2	EPA Region 4	Sediment ESV	Not specified	0.000200
56-38-2	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.001200
56-38-2	EPA Region 6	Sediment Freshwater	Not specified	0.000740
56-38-2	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.002000
56-38-2	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.003700

Benchmark Values for Parathion in Sediment (Fresh Water)

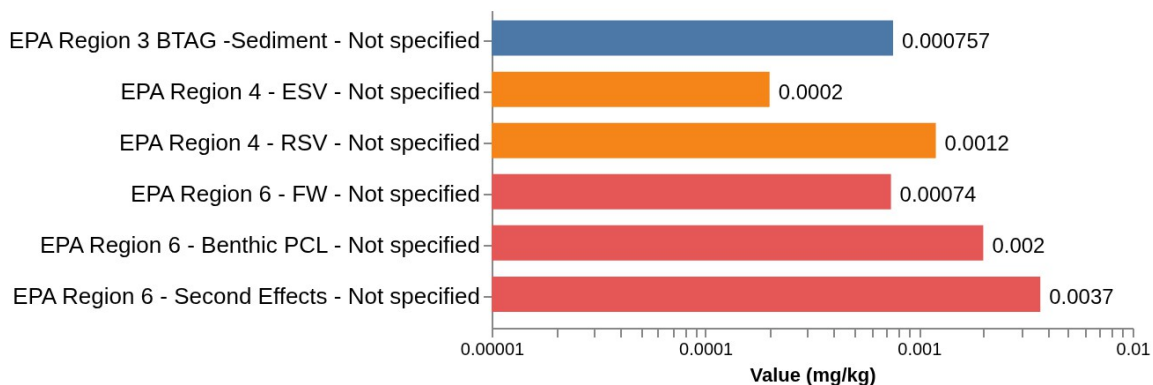


Table 202: Benchmark Values for Pendimethalin in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
40487-42-1	New York DEC	Freshwater Sediment Class A	Not specified	3.4	23
40487-42-1	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	3.4	
40487-42-1	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	28.0	
40487-42-1	New York DEC	Freshwater Sediment Class C	Not specified	28.0	22

Benchmark Values for Pendimethalin in Sediment (Fresh Water)

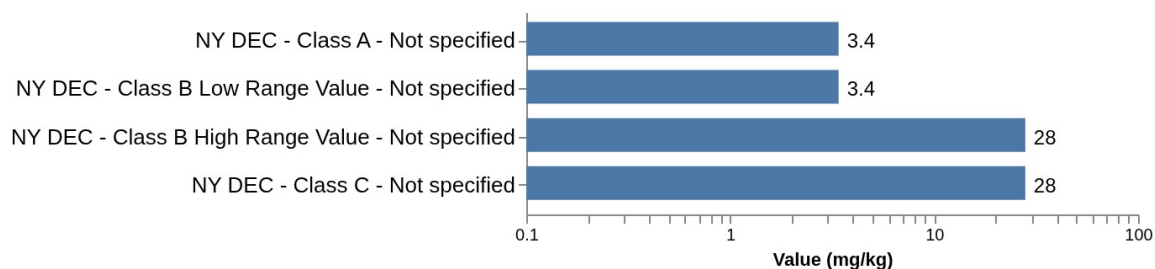


Table 203: Benchmark Values for Pentachloroaniline in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
527-20-8	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.621

Benchmark Values for Pentachloroaniline in Sediment (Fresh Water)

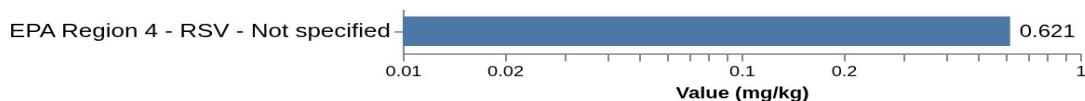


Table 204: Benchmark Values for Pentachlorobenzene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
608-93-5	EPA Region 3	BTAG – Freshwater Sediment	Not specified	8.890	
608-93-5	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.116	7
608-93-5	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.150	7
608-93-5	EPA Region 6	Sediment Freshwater	Not specified	0.150	
608-93-5	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	1.405	
608-93-5	EPA Region 6	Sediment Freshwater Second Effects	Not specified	2.660	
608-93-5	New York DEC	Freshwater Sediment Class A	Not specified	0.150	23
608-93-5	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.150	
608-93-5	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	2.000	
608-93-5	New York DEC	Freshwater Sediment Class C	Not specified	2.000	22

Benchmark Values for Pentachlorobenzene in Sediment (Fresh Water)

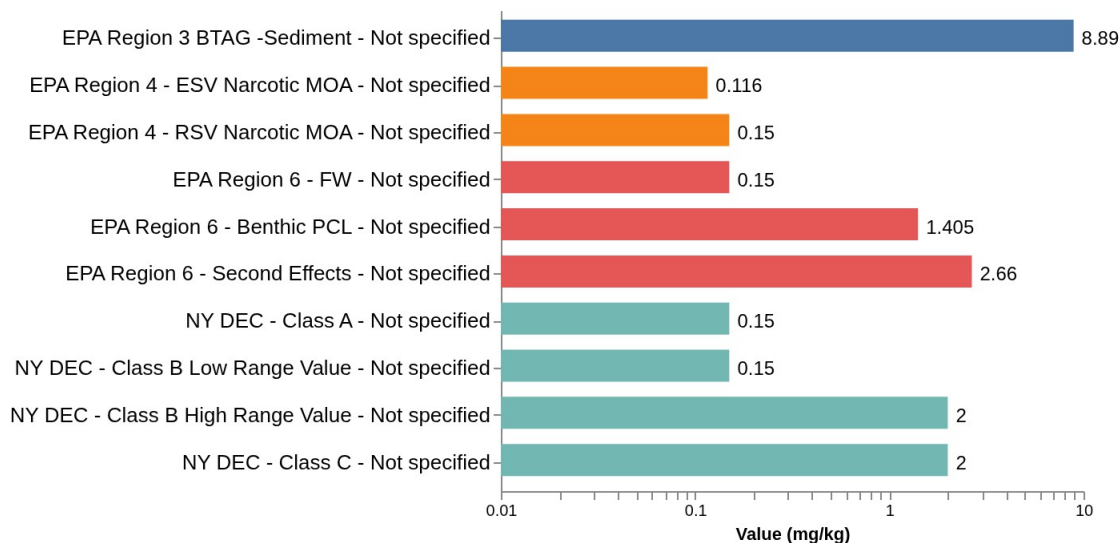
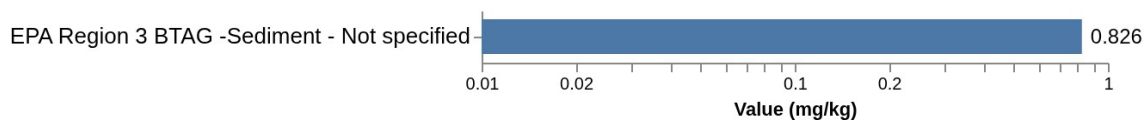


Table 205: Benchmark Values for Pentachloroethane in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
76-01-7	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.826

Benchmark Values for Pentachloroethane in Sediment (Fresh Water)**Table 206: Benchmark Values for Pentachlorophenol in Sediment (Fresh Water)**

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
87-86-5	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.504	
87-86-5	EPA Region 4	Sediment ESV	Wildlife only	0.010	7
87-86-5	EPA Region 4	Sediment ESV	Aquatic only	0.065	7, 28
87-86-5	EPA Region 4	Freshwater Refinement Screening Value	Aquatic only	1.200	7, 28
87-86-5	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	1.200	
87-86-5	EPA Region 6	Sediment Freshwater	Not specified	1.200	
87-86-5	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1.200	
87-86-5	New York DEC	Freshwater Sediment Class A	Not specified	14.000	23
87-86-5	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	14.000	
87-86-5	New York DEC	Freshwater Sediment Class C	Not specified	19.000	22
87-86-5	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	19.000	
87-86-5	Washington	Freshwater Sediment Cleanup Objective	Not specified	1.200	
87-86-5	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	1.200	22

Benchmark Values for Pentachlorophenol in Sediment (Fresh Water)

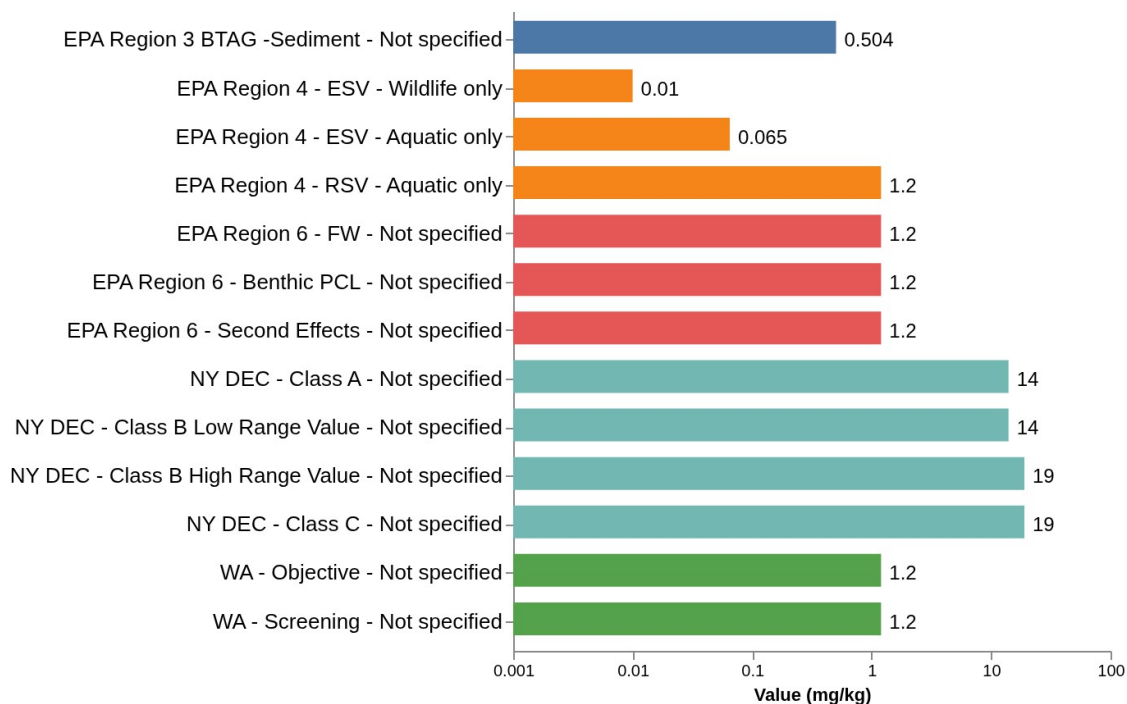


Table 207: Benchmark Values for Pentaerythritol tetranitrate (PETN) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
78-11-5	EPA Region 6	Sediment Freshwater	Not specified	310.94
78-11-5	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	621.87
78-11-5	EPA Region 6	Sediment Freshwater Second Effects	Not specified	932.81

Benchmark Values for Pentaerythritol tetranitrate (PETN) in Sediment (Fresh Water)

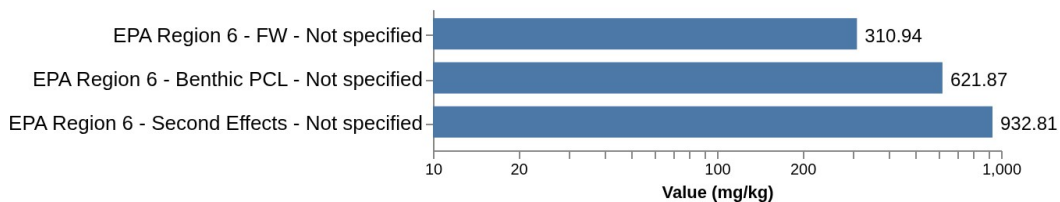


Table 208: Benchmark Values for Pentyl Alcohol, N- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
71-41-0	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.040
71-41-0	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	4.597
71-41-0	EPA Region 6	Sediment Freshwater	Not specified	0.070
71-41-0	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.850
71-41-0	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1.630

Benchmark Values for Pentyl Alcohol, N- in Sediment (Fresh Water)

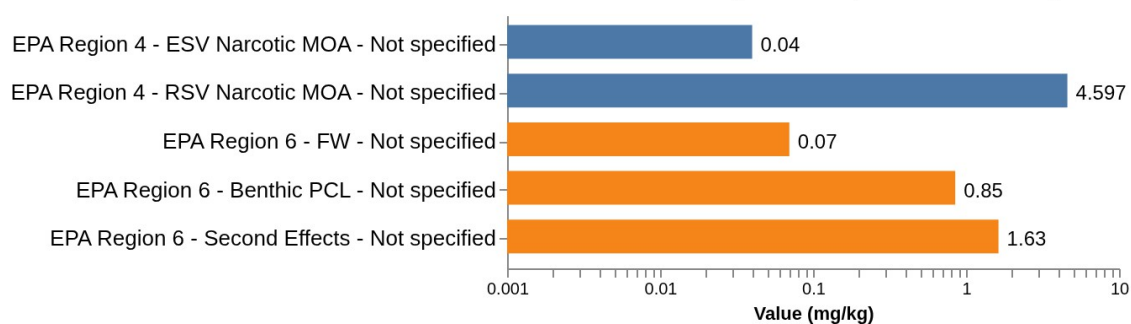


Table 209: Benchmark Values for Phenanthrene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
85-01-8	Canada	Sediment Freshwater ISQG	Not specified	0.0419	
85-01-8	Canada	Sediment Freshwater PEL	Not specified	0.5150	
85-01-8	EPA OSWER	Freshwater SQC	Not specified	0.8500	
85-01-8	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.2040	
85-01-8	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.2040	7, 28
85-01-8	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	5.9600	7
85-01-8	EPA Region 6	Sediment Freshwater	Not specified	0.2040	
85-01-8	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.6900	
85-01-8	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1.1700	
85-01-8	Florida	Freshwater TEL	Not specified	0.0419	
85-01-8	Florida	Freshwater ERL	Not specified	0.2250	
85-01-8	Florida	Freshwater MET	Not specified	0.4000	
85-01-8	Florida	Freshwater PEL	Not specified	0.5150	
85-01-8	Florida	Freshwater LEL	Not specified	0.5600	
85-01-8	Florida	Freshwater TET	Not specified	0.8000	
85-01-8	Florida	Freshwater ERM	Not specified	1.3800	
85-01-8	Florida	Freshwater SEL	Not specified	9.5000	

Benchmark Values for Phenanthrene in Sediment (Fresh Water)

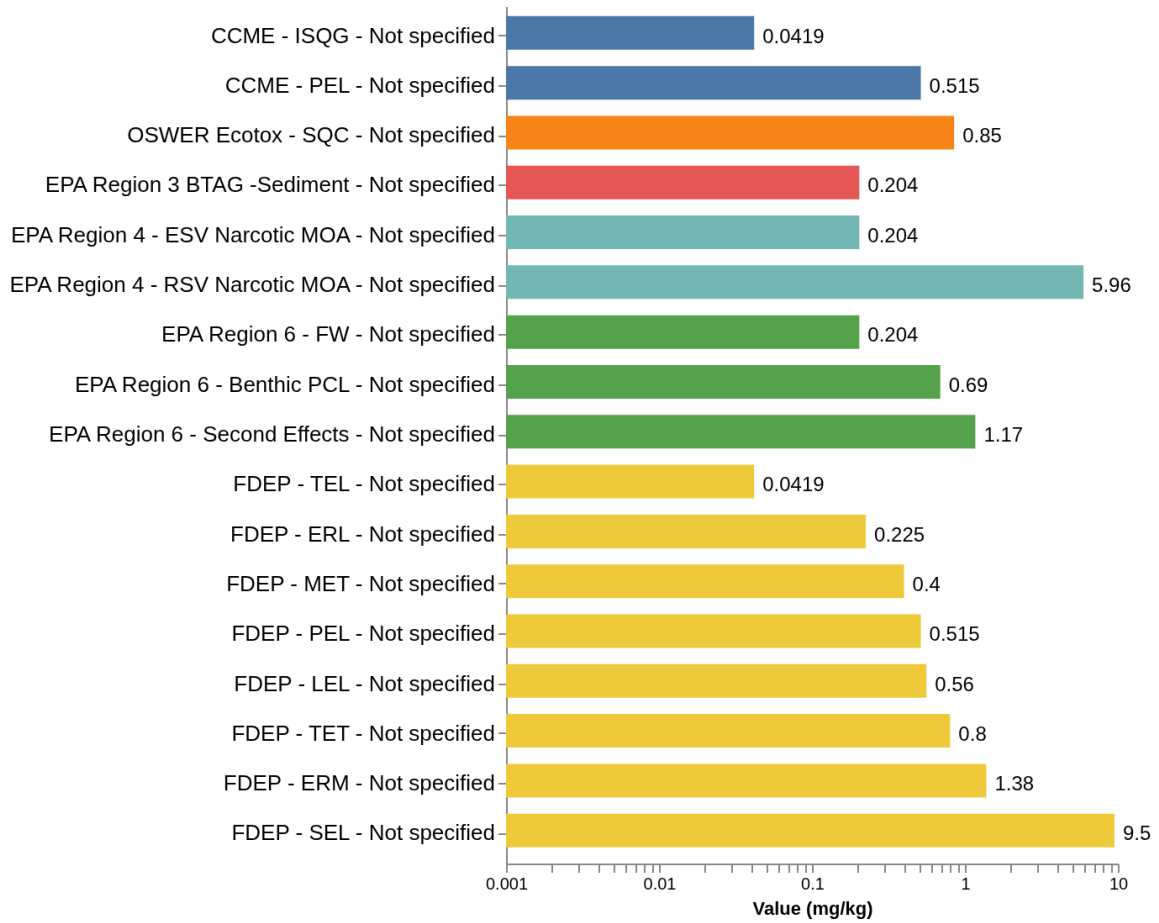


Table 210: Benchmark Values for Phenol in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
108-95-2	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.420	
108-95-2	EPA Region 4	Sediment ESV	Not specified	0.175	
108-95-2	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.210	28
108-95-2	EPA Region 6	Sediment Freshwater	Not specified	0.120	
108-95-2	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.170	
108-95-2	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.210	
108-95-2	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.120	
108-95-2	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	0.210	

Benchmark Values for Phenol in Sediment (Fresh Water)

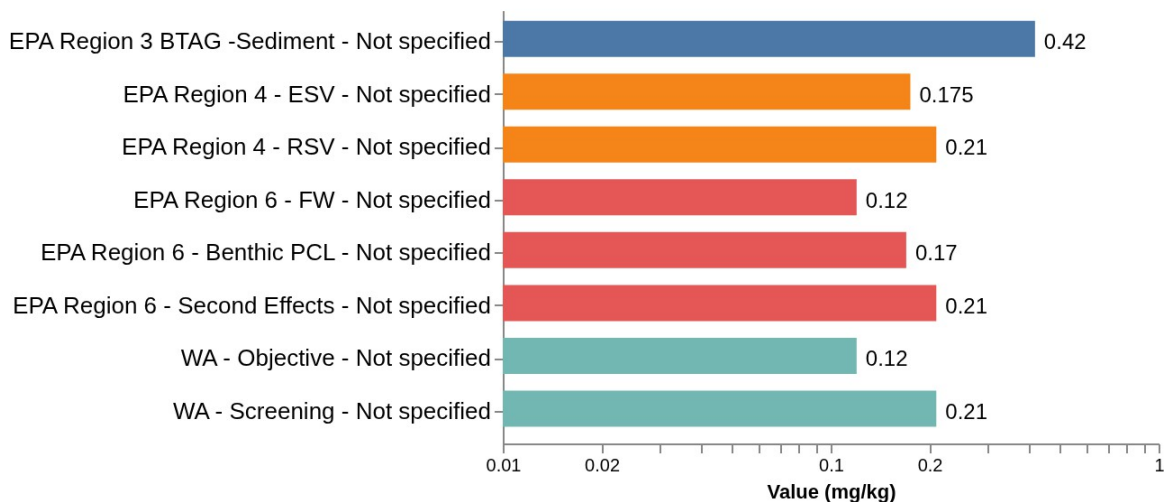


Table 211: Benchmark Values for Phorate in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
298-02-2	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.201

Benchmark Values for Phorate in Sediment (Fresh Water)



Table 212: Benchmark Values for Polychlorinated Biphenyls (high risk) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
1336-36-3	Canada	Sediment Freshwater ISQG	Not specified	0.0341	
1336-36-3	Canada	Sediment Freshwater PEL	Not specified	0.2770	
1336-36-3	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0598	
1336-36-3	EPA Region 4	Sediment ESV	Wildlife only	0.0140	7
1336-36-3	EPA Region 4	Sediment ESV	Not specified	0.0598	7, 28
1336-36-3	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.6760	7, 28
1336-36-3	EPA Region 6	Sediment Freshwater	Not specified	0.0598	
1336-36-3	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.3700	
1336-36-3	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.6760	17

Benchmark Values for Polychlorinated Biphenyls (high risk) in Sediment (Fresh Water)

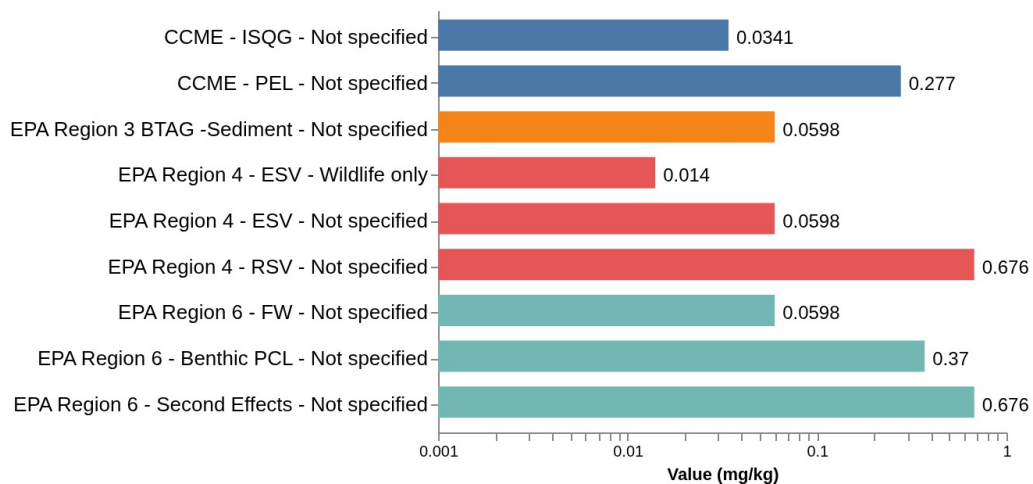


Table 213: Benchmark Values for Polychlorinated Biphenyls (PCBs) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
000000-17-0	Florida	Freshwater TEL	Not specified	0.0341	
000000-17-0	Florida	Freshwater ERL	Not specified	0.0500	
000000-17-0	Florida	Freshwater LEL	Not specified	0.0700	
000000-17-0	Florida	Freshwater MET	Not specified	0.2000	
000000-17-0	Florida	Freshwater PEL	Not specified	0.2770	
000000-17-0	Florida	Freshwater ERM	Not specified	0.4000	
000000-17-0	Florida	Freshwater TET	Not specified	1.0000	
000000-17-0	Florida	Freshwater SEL	Not specified	5.3000	
000000-17-0	New York DEC	Freshwater Sediment Class A	Not specified	0.1000	23
000000-17-0	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.1000	
000000-17-0	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	1.0000	
000000-17-0	New York DEC	Freshwater Sediment Class C	Not specified	1.0000	22
000000-17-0	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.1100	
000000-17-0	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	2.5000	

Benchmark Values for Polychlorinated Biphenyls (PCBs) in Sediment (Fresh Water)

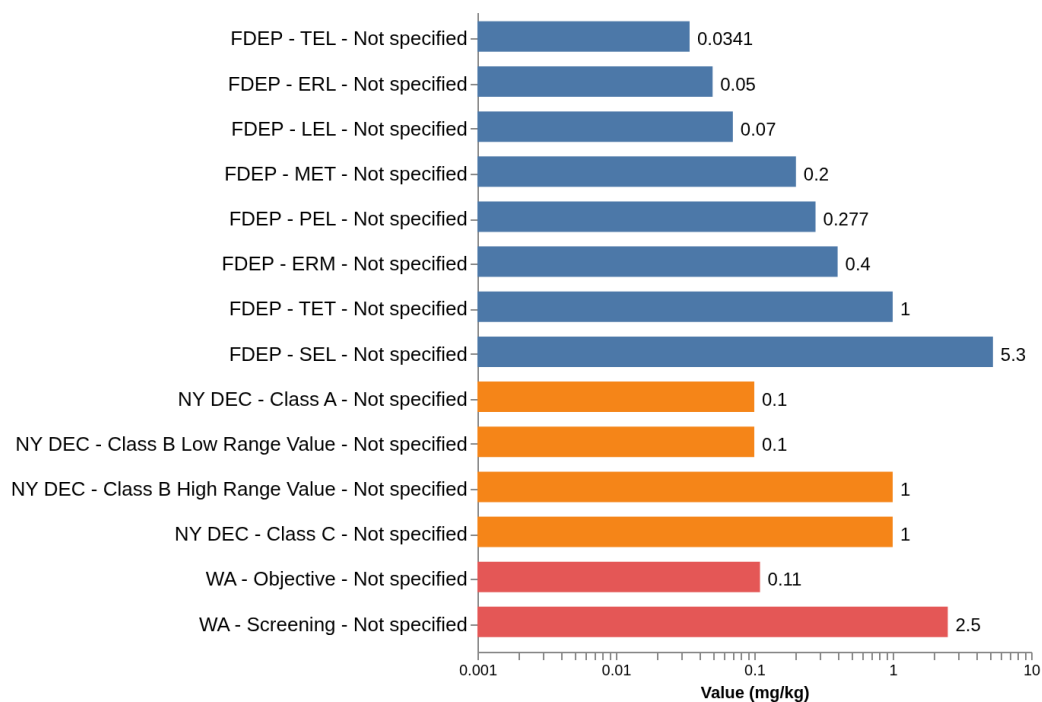


Table 214: Benchmark Values for Polycyclic aromatic hydrocarbons (PAH), Total (high molecular weight) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
000000-03-4	British Columbia	Freshwater Sediment LTC	Not specified	1.00
000000-03-4	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.19
000000-03-4	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	1.00

Benchmark Values for Polycyclic aromatic hydrocarbons (PAH), Total (high molecular weight) in Sediment (Fresh Water)

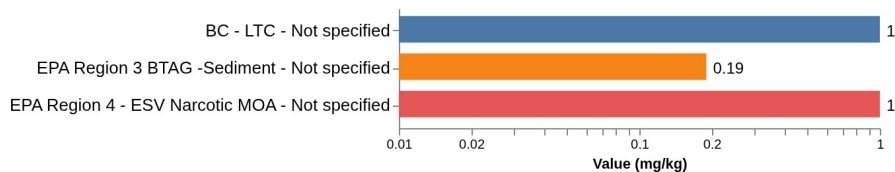


Table 215: Benchmark Values for Polycyclic aromatic hydrocarbons (PAH), Total (low molecular weight) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
000000-03-3	British Columbia	Freshwater Sediment LTC	Not specified	0.100
000000-03-3	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.076
000000-03-3	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.600

Benchmark Values for Polycyclic aromatic hydrocarbons (PAH), Total (low molecular weight) in Sediment (Fresh Water)

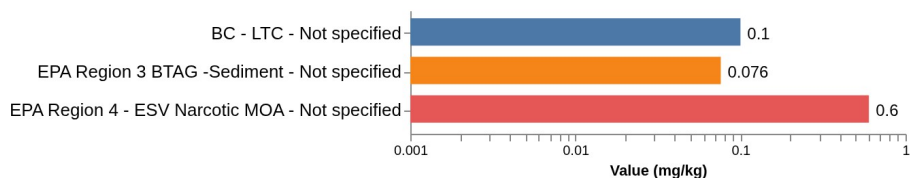


Table 216: Benchmark Values for Polycyclic aromatic hydrocarbons (PAH), Total in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
000000-04-1	British Columbia	Freshwater Sediment LTC – No Effect	Not specified	4.000	
000000-04-1	British Columbia	Freshwater Sediment LTC – Probable Effect	Not specified	35.000	
000000-04-1	EPA Region 3	BTAG – Freshwater Sediment	Not specified	1.610	
000000-04-1	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	1.610	
000000-04-1	EPA Region 6	Sediment Freshwater	Not specified	1.610	17, 20
000000-04-1	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	12.205	17, 20
000000-04-1	EPA Region 6	Sediment Freshwater Second Effects	Not specified	22.800	17, 20
000000-04-1	Florida	Freshwater LEL	Not specified	4.000	
000000-04-1	Florida	Freshwater ERL	Not specified	4.000	
000000-04-1	Florida	Freshwater ERM	Not specified	35.000	
000000-04-1	Florida	Freshwater SEL	Not specified	100.000	
000000-04-1	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	4.000	
000000-04-1	New York DEC	Freshwater Sediment Class A	Not specified	4.000	23
000000-04-1	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	35.000	
000000-04-1	New York DEC	Freshwater Sediment Class C	Not specified	35.000	22
000000-04-1	Washington	Freshwater Sediment Cleanup Objective	Not specified	17.000	
000000-04-1	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	30.000	

Benchmark Values for Polycyclic aromatic hydrocarbons (PAH), Total in Sediment (Fresh Water)

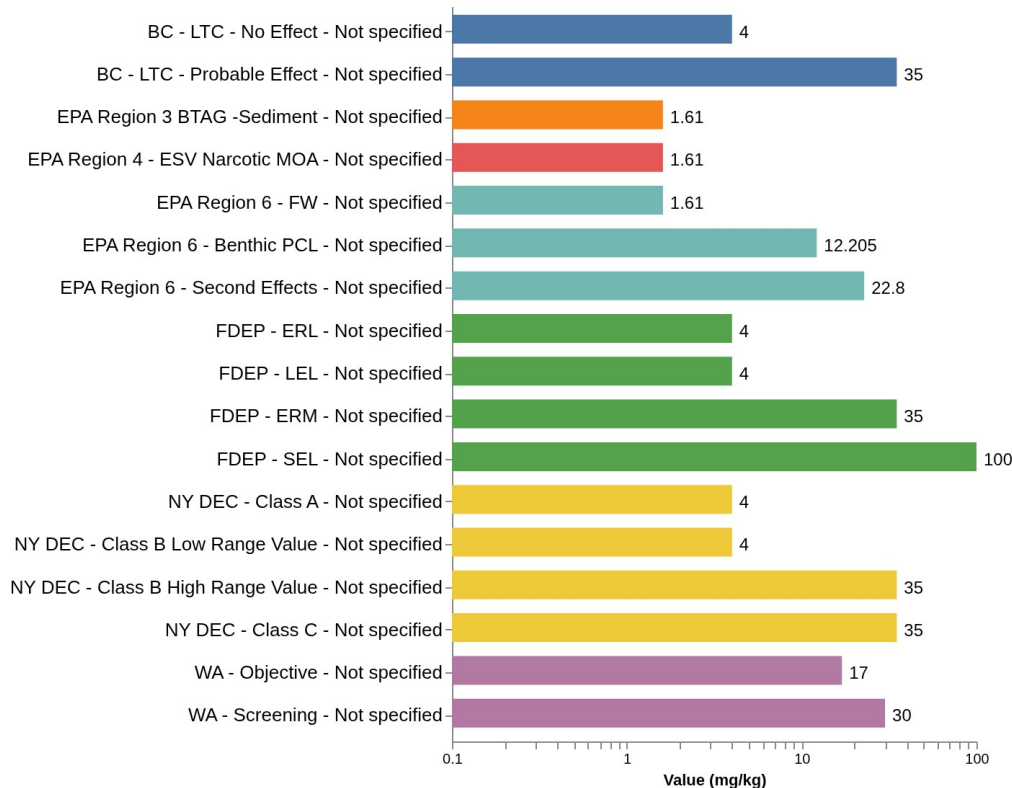


Table 217: Benchmark Values for Prometon in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
1610-18-0	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	1.7	
1610-18-0	New York DEC	Freshwater Sediment Class A	Not specified	1.7	23
1610-18-0	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	21.0	
1610-18-0	New York DEC	Freshwater Sediment Class C	Not specified	21.0	22

Benchmark Values for Prometon in Sediment (Fresh Water)

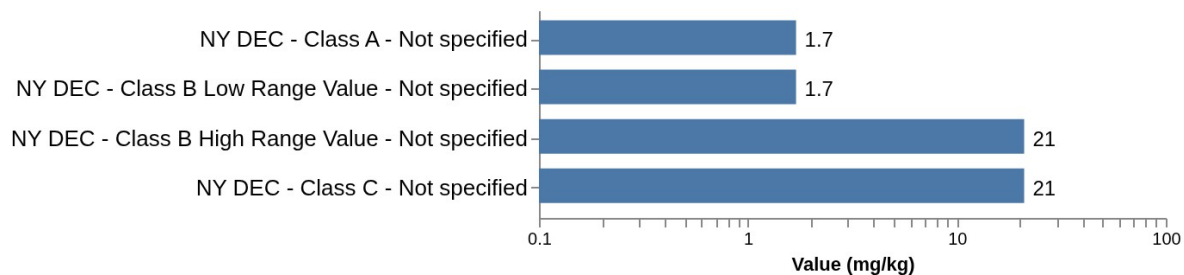


Table 218: Benchmark Values for Propyl benzene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
103-65-1	EPA Region 6	Sediment Freshwater	Not specified	0.72
103-65-1	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	2.54
103-65-1	EPA Region 6	Sediment Freshwater Second Effects	Not specified	4.35

Benchmark Values for Propyl benzene in Sediment (Fresh Water)

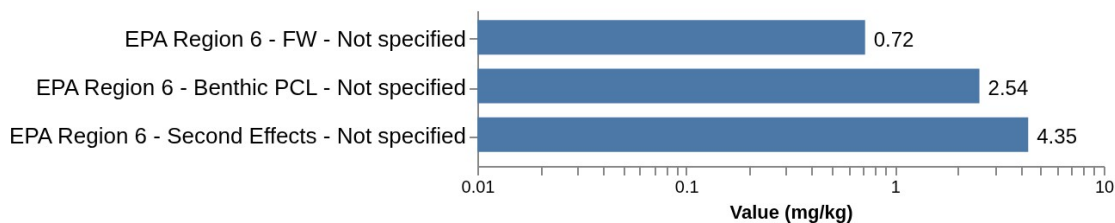


Table 219: Benchmark Values for Propylene Glycol in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
57-55-6	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.022
57-55-6	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	100.268

Benchmark Values for Propylene Glycol in Sediment (Fresh Water)

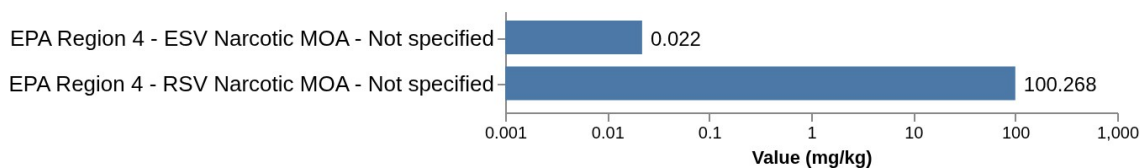


Table 220: Benchmark Values for Pyrene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
129-00-0	Canada	Sediment Freshwater ISQG	Not specified	0.053	
129-00-0	Canada	Sediment Freshwater PEL	Not specified	0.875	
129-00-0	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.195	
129-00-0	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.195	28
129-00-0	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	6.970	
129-00-0	EPA Region 6	Sediment Freshwater	Not specified	0.195	
129-00-0	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.860	
129-00-0	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1.520	
129-00-0	Florida	Freshwater TEL	Not specified	0.053	
129-00-0	Florida	Freshwater ERL	Not specified	0.350	
129-00-0	Florida	Freshwater LEL	Not specified	0.490	
129-00-0	Florida	Freshwater MET	Not specified	0.700	
129-00-0	Florida	Freshwater PEL	Not specified	0.875	
129-00-0	Florida	Freshwater TET	Not specified	1.000	
129-00-0	Florida	Freshwater ERM	Not specified	2.200	
129-00-0	Florida	Freshwater SEL	Not specified	8.500	

Benchmark Values for Pyrene in Sediment (Fresh Water)

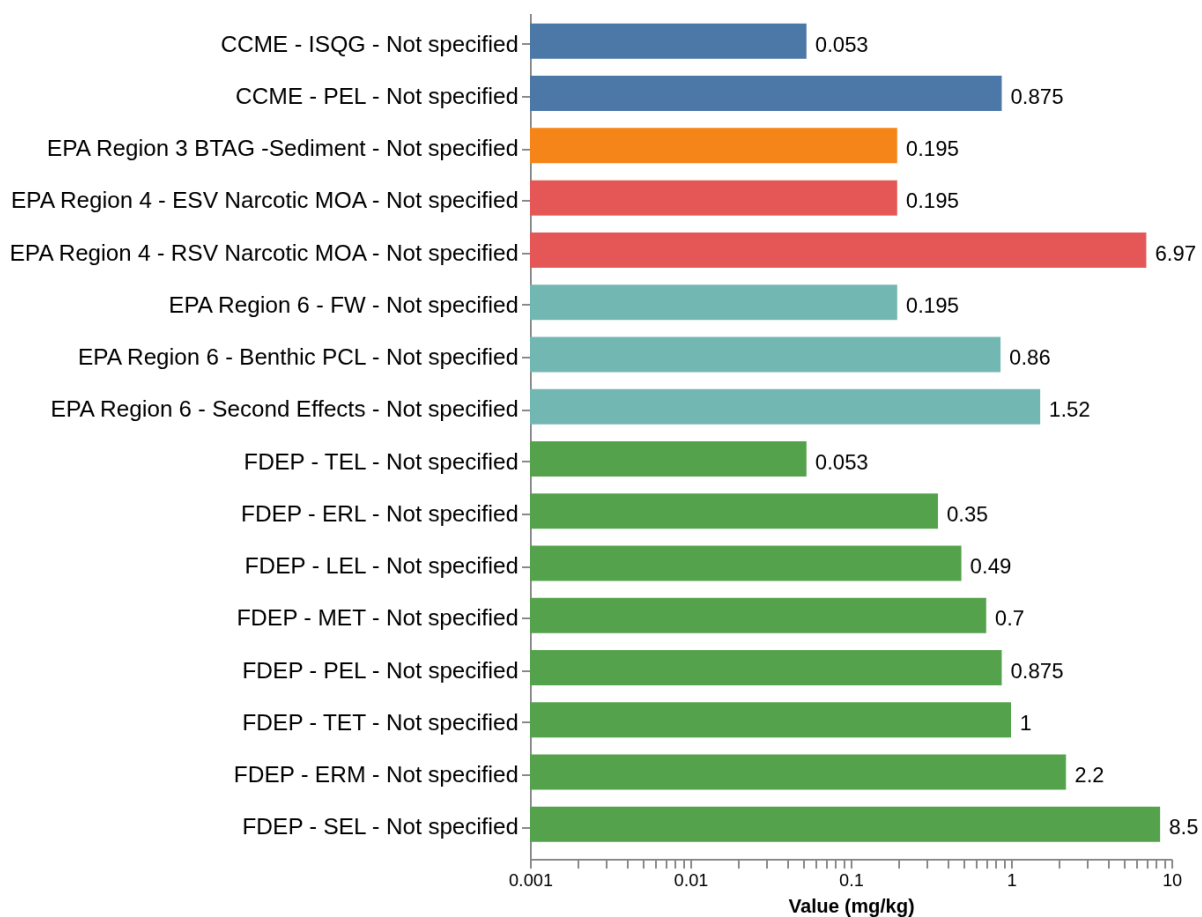


Table 221: Benchmark Values for Quinoline in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
91-22-5	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.003
91-22-5	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	2.398

Benchmark Values for Quinoline in Sediment (Fresh Water)

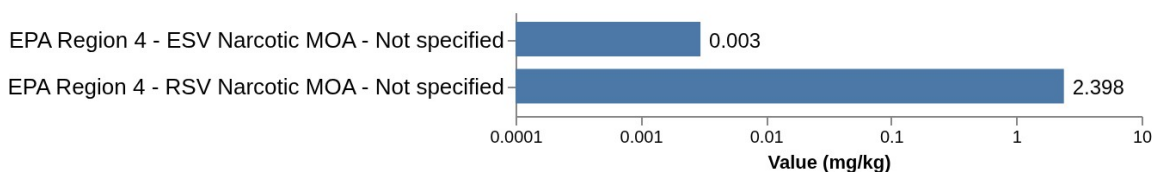


Table 222: Benchmark Values for Selenium in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
7782-49-2	British Columbia	Freshwater Sediment LTC	Not specified	2.00	
7782-49-2	EPA Region 3	BTAG – Freshwater Sediment	Not specified	2.00	
7782-49-2	EPA Region 4	Sediment ESV	Not specified	0.72	7
7782-49-2	EPA Region 4	Sediment ESV	Wildlife only	0.80	7
7782-49-2	EPA Region 4	Freshwater Refinement Screening Value	Wildlife only	1.20	7
7782-49-2	EPA Region 4	Freshwater Refinement Screening Value	Not specified	2.90	7
7782-49-2	Washington	Freshwater Sediment Cleanup Objective	Not specified	11.00	
7782-49-2	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	20.00	22

Benchmark Values for Selenium in Sediment (Fresh Water)

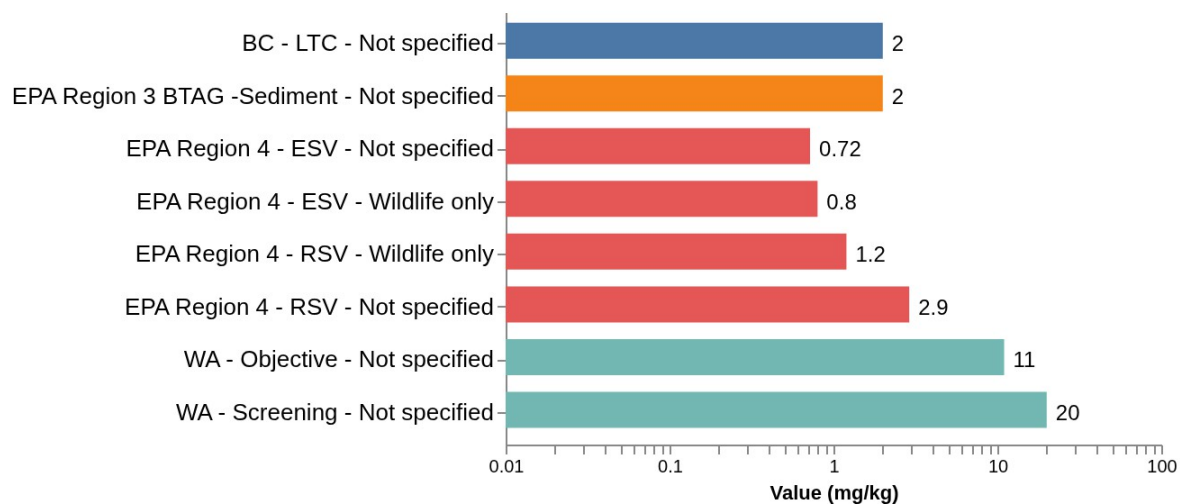


Table 223: Benchmark Values for Silver in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
7440-22-4	British Columbia	Freshwater Sediment LTC	Not specified	0.50	
7440-22-4	EPA Region 3	BTAG – Freshwater Sediment	Not specified	1.00	
7440-22-4	EPA Region 4	Sediment ESV	Not specified	1.00	
7440-22-4	EPA Region 4	Freshwater Refinement Screening Value	Not specified	2.20	
7440-22-4	EPA Region 6	Sediment Freshwater	Not specified	0.57	
7440-22-4	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	1.14	
7440-22-4	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1.70	
7440-22-4	New York DEC	Freshwater Sediment Class A	Not specified	1.00	23
7440-22-4	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	1.00	
7440-22-4	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	2.20	
7440-22-4	New York DEC	Freshwater Sediment Class C	Not specified	2.20	22
7440-22-4	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.57	
7440-22-4	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	1.70	

Benchmark Values for Silver in Sediment (Fresh Water)

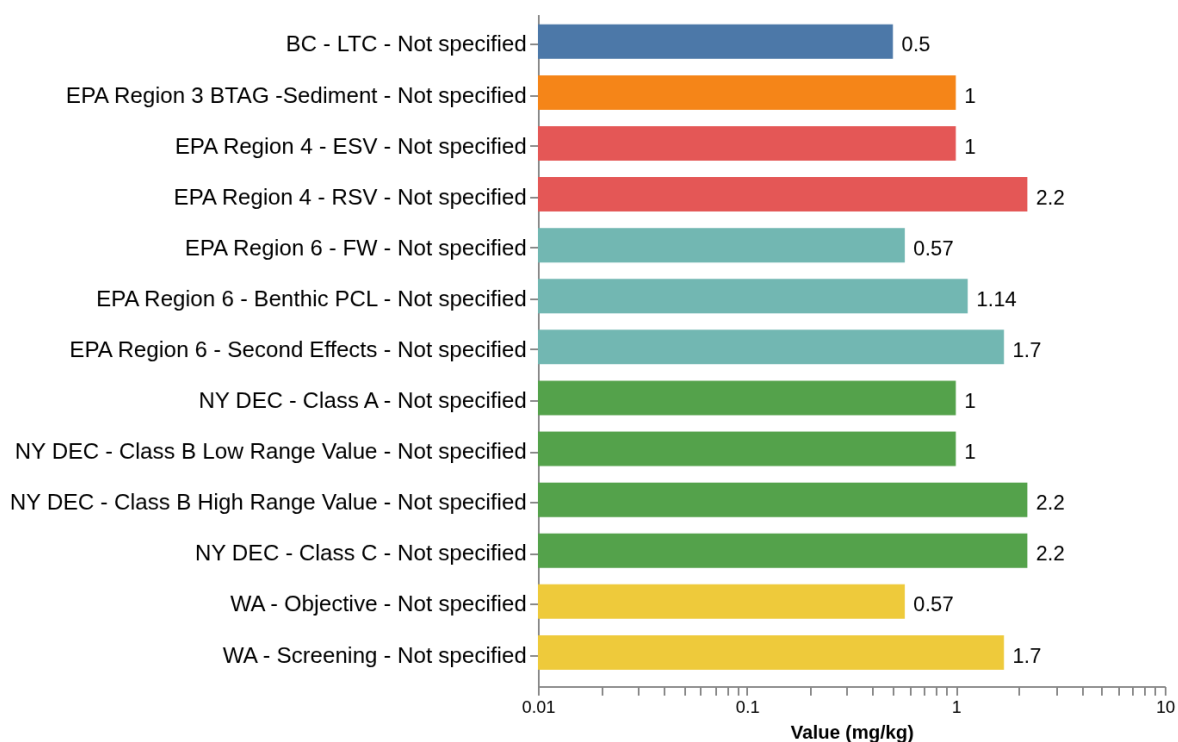


Table 224: Benchmark Values for Simazine in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
122-34-9	EPA Region 4	Sediment ESV	Not specified	0.0003
122-34-9	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.0720

Benchmark Values for Simazine in Sediment (Fresh Water)

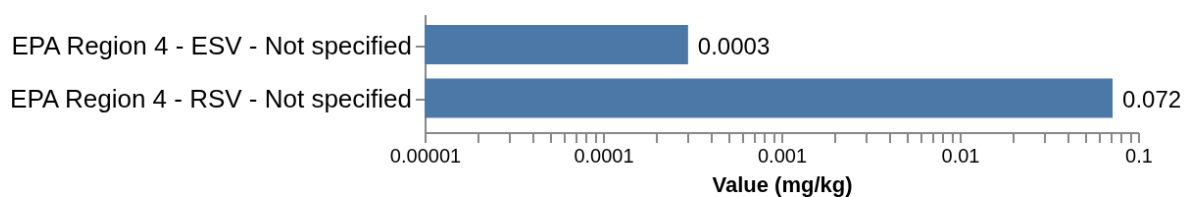


Table 225: Benchmark Values for Styrene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
100-42-5	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.559
100-42-5	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.126
100-42-5	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	1.621
100-42-5	EPA Region 6	Sediment Freshwater	Not specified	10.240
100-42-5	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	35.830
100-42-5	EPA Region 6	Sediment Freshwater Second Effects	Not specified	61.420

Benchmark Values for Styrene in Sediment (Fresh Water)

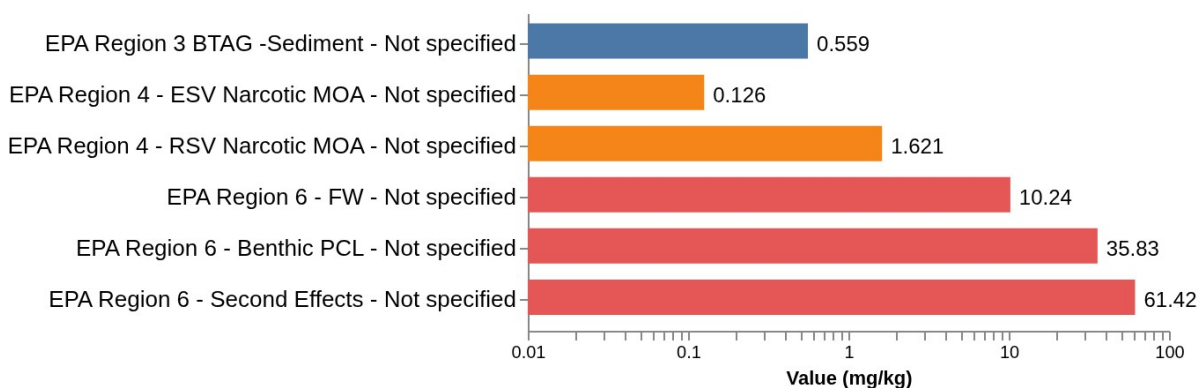


Table 226: Benchmark Values for Sulfide in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
18496-25-8	EPA Region 3	BTAG – Freshwater Sediment	Not specified	130.0
18496-25-8	EPA Region 4	Sediment ESV	Not specified	39.0
18496-25-8	EPA Region 4	Freshwater Refinement Screening Value	Not specified	61.0

Benchmark Values for Sulfide in Sediment (Fresh Water)

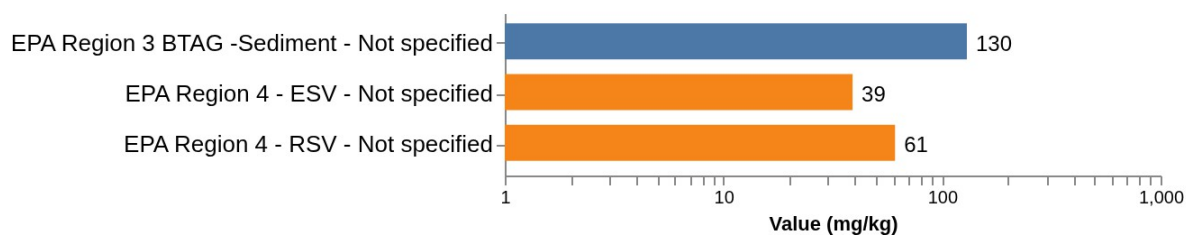
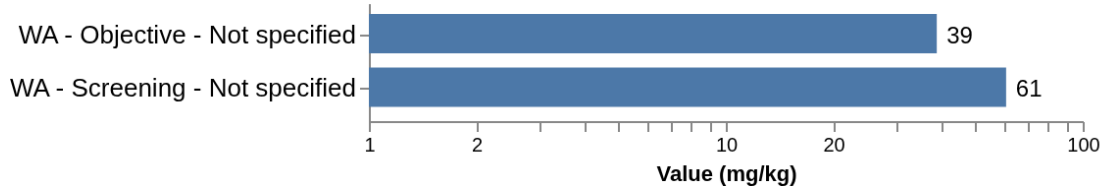


Table 227: Benchmark Values for Sulfides (total) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
000000-18-0	Washington	Freshwater Sediment Cleanup Objective	Not specified	39.0
000000-18-0	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	61.0

Benchmark Values for Sulfides (total) in Sediment (Fresh Water)**Table 228: Benchmark Values for TCDD, 2,3,7,8- in Sediment (Fresh Water)**

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
1746-01-6	EPA Region 3	BTAG – Freshwater Sediment	Not specified	8.500000e-07	
1746-01-6	EPA Region 4	Sediment ESV	Aquatic only	5.000000e-07	7, 28
1746-01-6	EPA Region 4	Sediment ESV	Wildlife only	2.000000e-06	7, 28
1746-01-6	EPA Region 4	Freshwater Refinement Screening Value	Wildlife only	2.200000e-06	7, 28
1746-01-6	EPA Region 4	Sediment ESV	Not specified	2.500000e-06	7, 28
1746-01-6	EPA Region 4	Freshwater Refinement Screening Value	Aquatic only	8.500000e-06	7, 28
1746-01-6	EPA Region 4	Freshwater Refinement Screening Value	Not specified	2.500000e-05	7, 28

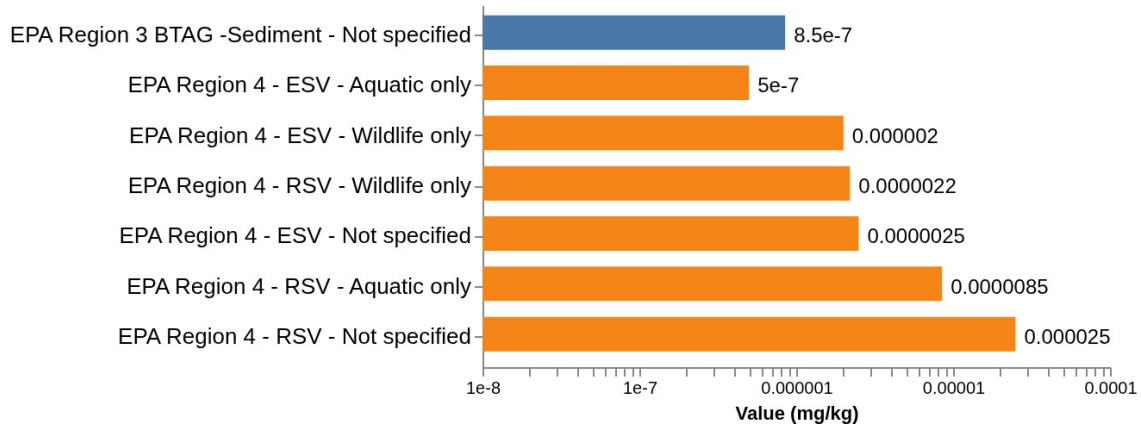
Benchmark Values for TCDD, 2,3,7,8- in Sediment (Fresh Water)

Table 229: Benchmark Values for Tetrabutyltin in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
1461-25-2	EPA Region 4	Sediment ESV	Not specified	0.097	
1461-25-2	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.097	
1461-25-2	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	0.097	22
1461-25-2	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.097	

Benchmark Values for Tetrabutyltin in Sediment (Fresh Water)

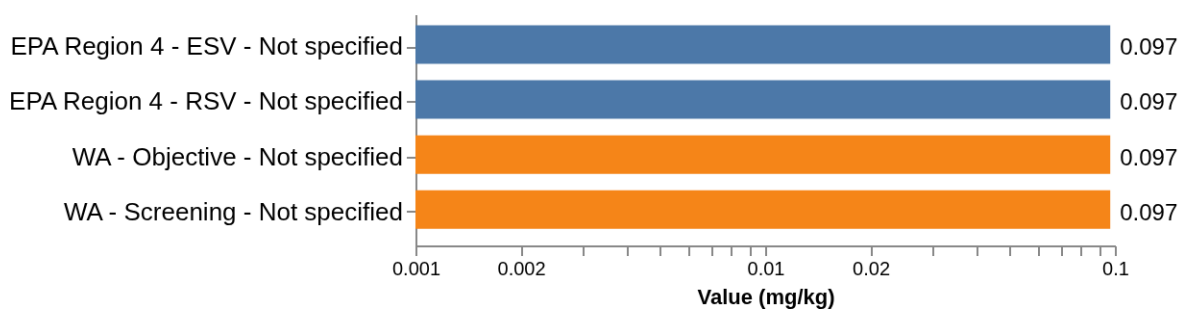


Table 230: Benchmark Values for Tetrachlorobenzene, 1,2,3,4- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
634-66-2	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.702	
634-66-2	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.069	
634-66-2	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.138	
634-66-2	New York DEC	Freshwater Sediment Class A	Not specified	1.000	23
634-66-2	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	1.000	
634-66-2	New York DEC	Freshwater Sediment Class C	Not specified	5.300	22
634-66-2	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	5.300	

Benchmark Values for Tetrachlorobenzene, 1,2,3,4- in Sediment (Fresh Water)

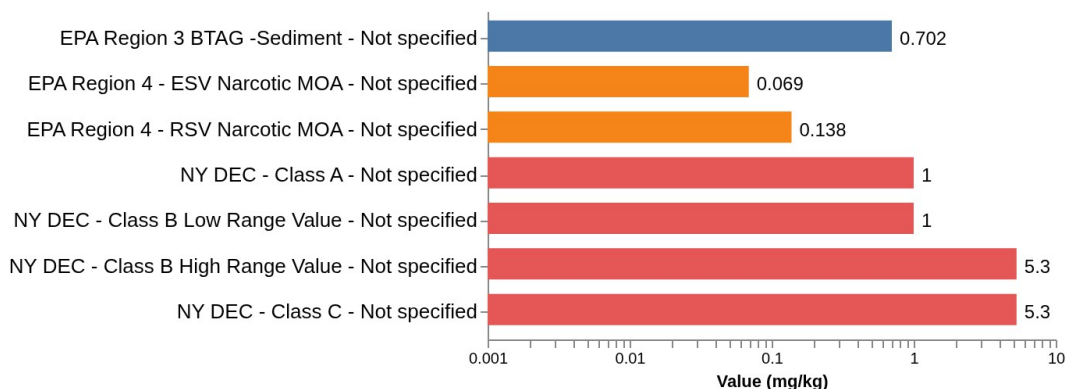


Table 231: Benchmark Values for Tetrachlorobenzene, 1,2,3,5- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
634-90-2	New York DEC	Freshwater Sediment Class A	Not specified	2.5	23
634-90-2	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	2.5	
634-90-2	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	22.0	
634-90-2	New York DEC	Freshwater Sediment Class C	Not specified	22.0	22

Benchmark Values for Tetrachlorobenzene, 1,2,3,5- in Sediment (Fresh Water)

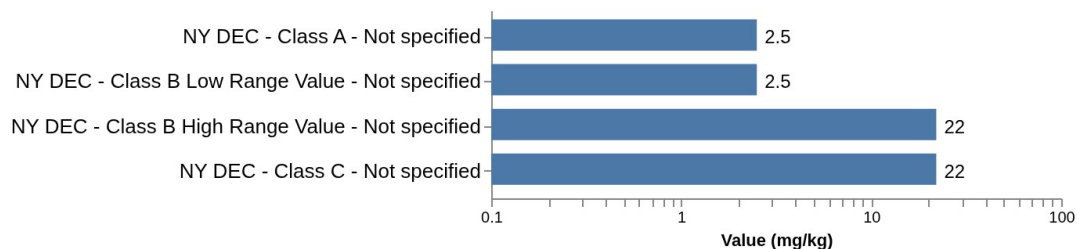


Table 232: Benchmark Values for Tetrachlorobenzene, 1,2,4,5- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
95-94-3	EPA Region 3	BTAG – Freshwater Sediment	Not specified	1.090	
95-94-3	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.135	
95-94-3	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.187	
95-94-3	EPA Region 6	Sediment Freshwater	Not specified	0.053	
95-94-3	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.820	
95-94-3	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1.590	
95-94-3	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	3.000	
95-94-3	New York DEC	Freshwater Sediment Class A	Not specified	3.000	23
95-94-3	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	14.000	
95-94-3	New York DEC	Freshwater Sediment Class C	Not specified	14.000	22

Benchmark Values for Tetrachlorobenzene, 1,2,4,5- in Sediment (Fresh Water)

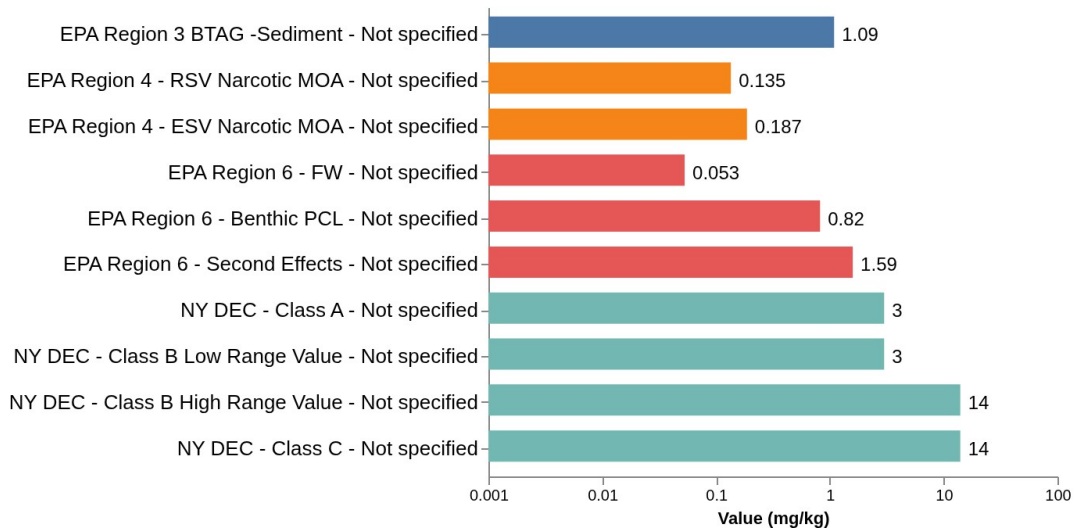


Table 233: Benchmark Values for Tetrachloroethane, 1,1,1,2- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
630-20-6	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.099	
630-20-6	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.418	
630-20-6	New York DEC	Freshwater Sediment Class A	Not specified	9.000	23
630-20-6	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	9.000	
630-20-6	New York DEC	Freshwater Sediment Class C	Not specified	18.000	22
630-20-6	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	18.000	

Benchmark Values for Tetrachloroethane, 1,1,1,2- in Sediment (Fresh Water)

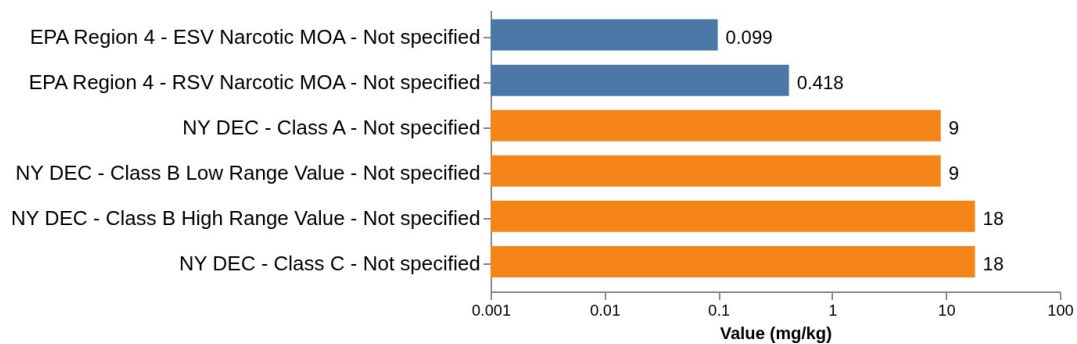


Table 234: Benchmark Values for Tetrachloroethane, 1,1,2,2- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
79-34-5	EPA Region 3	BTAG – Freshwater Sediment	Not specified	1.36	
79-34-5	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.25	
79-34-5	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	2.23	
79-34-5	EPA Region 6	Sediment Freshwater	Not specified	0.63	
79-34-5	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	2.22	
79-34-5	EPA Region 6	Sediment Freshwater Second Effects	Not specified	3.80	
79-34-5	New York DEC	Freshwater Sediment Class A	Not specified	2.80	23
79-34-5	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	2.80	
79-34-5	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	5.40	
79-34-5	New York DEC	Freshwater Sediment Class C	Not specified	5.40	22

Benchmark Values for Tetrachloroethane, 1,1,2,2- in Sediment (Fresh Water)

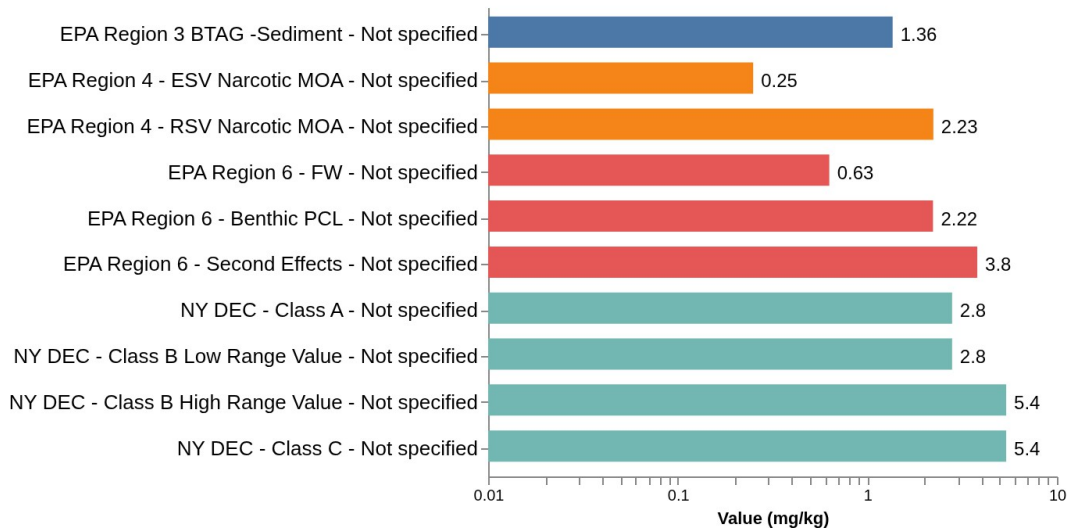


Table 235: Benchmark Values for Tetrachloroethylene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
127-18-4	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.468	28
127-18-4	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.002	
127-18-4	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.415	
127-18-4	EPA Region 6	Sediment Freshwater	Not specified	2.740	
127-18-4	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	5.480	
127-18-4	EPA Region 6	Sediment Freshwater Second Effects	Not specified	8.210	
127-18-4	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	16.000	23
127-18-4	New York DEC	Freshwater Sediment Class A	Not specified	16.000	
127-18-4	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	57.000	
127-18-4	New York DEC	Freshwater Sediment Class C	Not specified	57.000	22

Benchmark Values for Tetrachloroethylene in Sediment (Fresh Water)

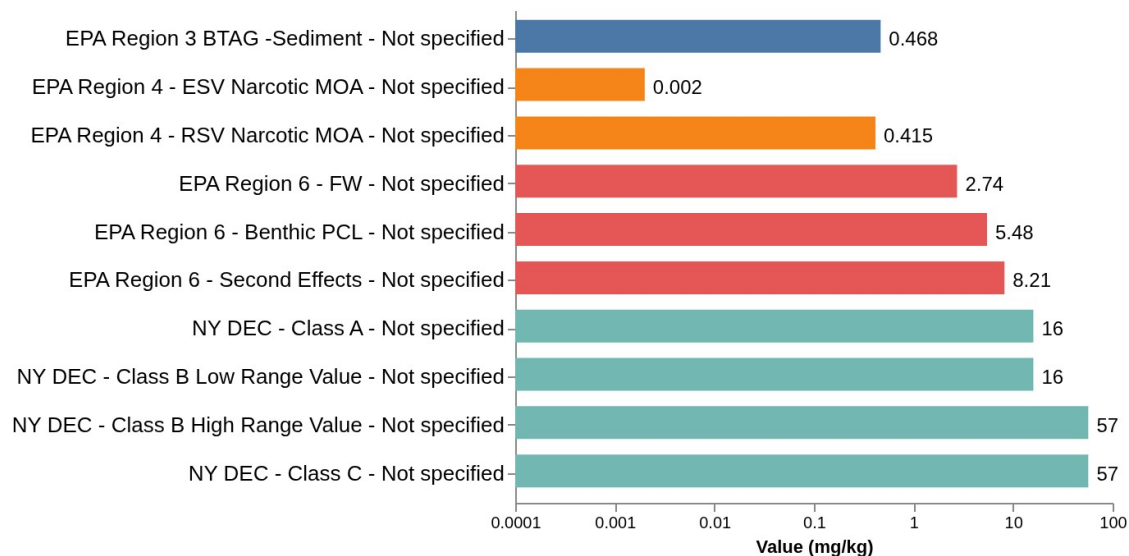


Table 236: Benchmark Values for Tetrachlorophenol, 2,3,4,6- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
58-90-2	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.284
58-90-2	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.030
58-90-2	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.948

Benchmark Values for Tetrachlorophenol, 2,3,4,6- in Sediment (Fresh Water)

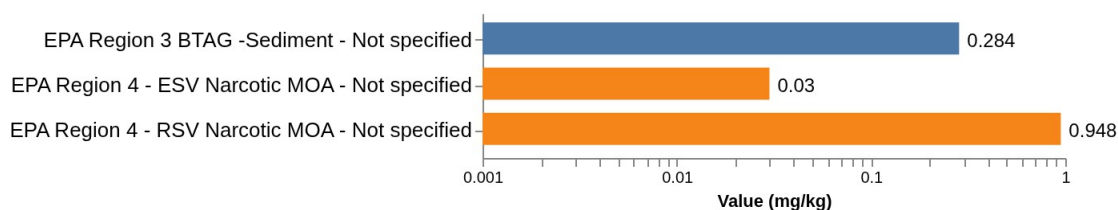


Table 237: Benchmark Values for Tetrahydrofuran in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
109-99-9	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	4.488
109-99-9	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	8.000

Benchmark Values for Tetrahydrofuran in Sediment (Fresh Water)

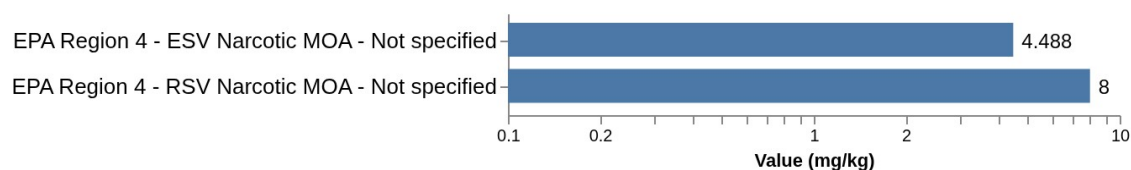


Table 238: Benchmark Values for Toluene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
108-88-3	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.010	28
108-88-3	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	2.074	
108-88-3	EPA Region 6	Sediment Freshwater	Not specified	6.760	
108-88-3	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	13.530	
108-88-3	EPA Region 6	Sediment Freshwater Second Effects	Not specified	20.290	
108-88-3	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.930	
108-88-3	New York DEC	Freshwater Sediment Class A	Not specified	0.930	23
108-88-3	New York DEC	Freshwater Sediment Class C	Not specified	4.500	22
108-88-3	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	4.500	

Benchmark Values for Toluene in Sediment (Fresh Water)

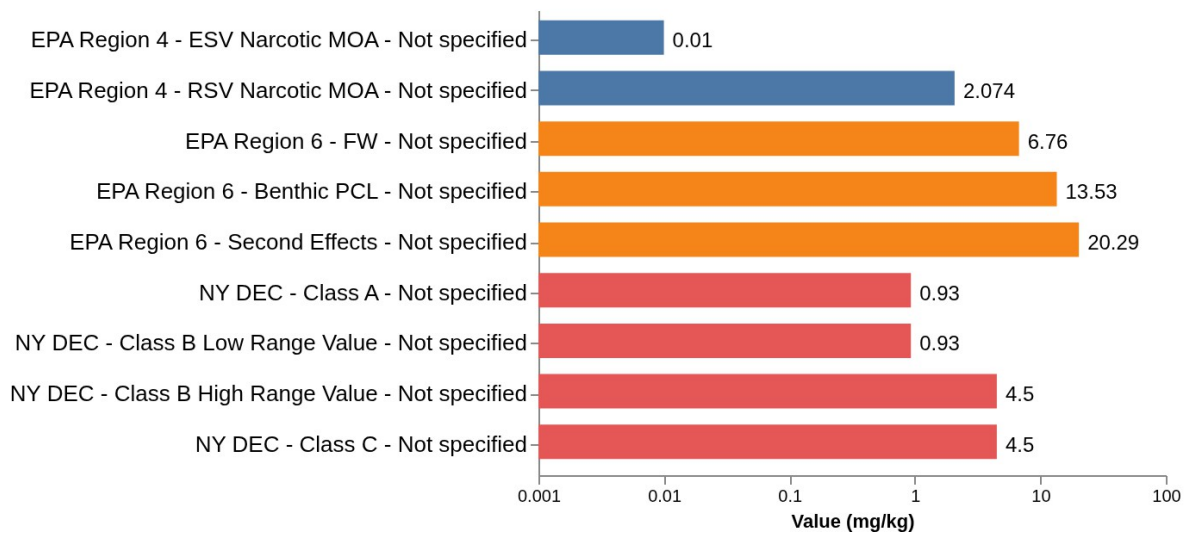


Table 239: Benchmark Values for Total Petroleum Hydrocarbons – Diesel in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
68334-30-5	EPA Region 4	Sediment ESV	Not specified	340.0
68334-30-5	EPA Region 4	Freshwater Refinement Screening Value	Not specified	510.0
68334-30-5	Washington	Freshwater Sediment Cleanup Objective	Not specified	340.0
68334-30-5	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	510.0

Benchmark Values for Total Petroleum Hydrocarbons - Diesel in Sediment (Fresh Water)

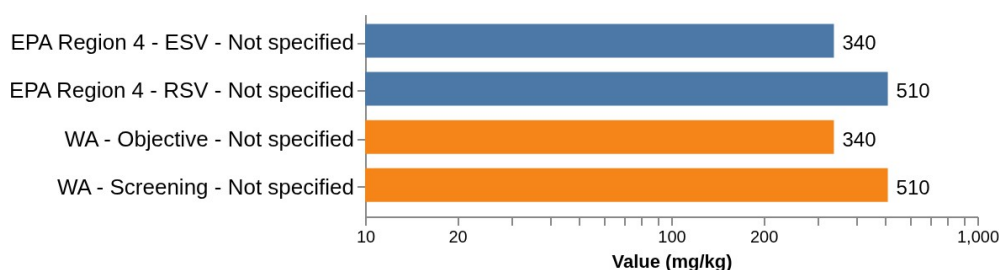


Table 240: Benchmark Values for Total Petroleum Hydrocarbons – Residual in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
68476-53-9	EPA Region 4	Sediment ESV	Not specified	3600.0
68476-53-9	EPA Region 4	Freshwater Refinement Screening Value	Not specified	4400.0
68476-53-9	Washington	Freshwater Sediment Cleanup Objective	Not specified	3600.0
68476-53-9	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	4400.0

Benchmark Values for Total Petroleum Hydrocarbons - Residual in Sediment (Fresh Water)

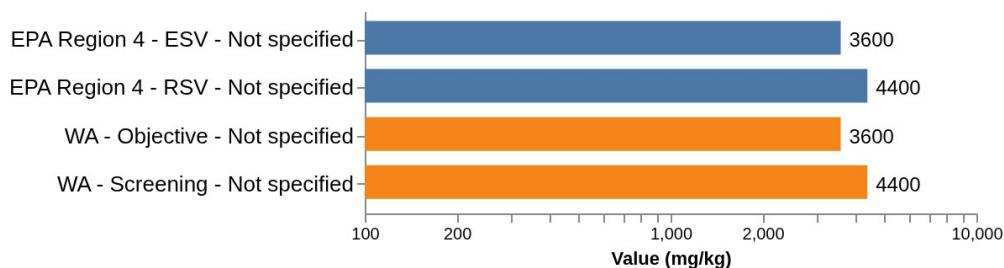


Table 241: Benchmark Values for Toxaphene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
8001-35-2	Canada	Sediment Freshwater ISQG	Not specified	0.0001	
8001-35-2	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0001	
8001-35-2	EPA Region 4	Sediment ESV	Aquatic and wildlife	0.0001	7, 28
8001-35-2	EPA Region 4	Freshwater Refinement Screening Value	Aquatic and wildlife	0.0320	7, 28
8001-35-2	EPA Region 6	Sediment Freshwater	Not specified	0.0001	
8001-35-2	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.0200	
8001-35-2	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.0320	
8001-35-2	New York DEC	Freshwater Sediment Class A	Not specified	0.0060	23
8001-35-2	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.0060	
8001-35-2	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	0.2500	
8001-35-2	New York DEC	Freshwater Sediment Class C	Not specified	0.2500	22

Benchmark Values for Toxaphene in Sediment (Fresh Water)

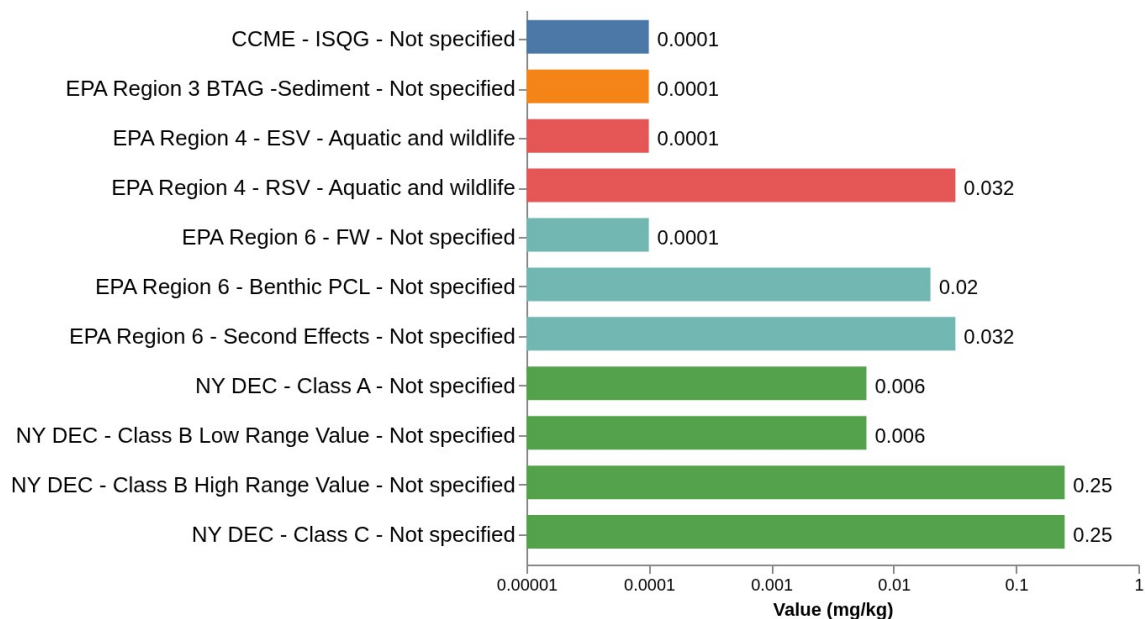


Table 242: Benchmark Values for Triadimefon in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
43121-43-3	New York DEC	Freshwater Sediment Class A	Not specified	0.22	23
43121-43-3	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.22	
43121-43-3	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	2.50	
43121-43-3	New York DEC	Freshwater Sediment Class C	Not specified	2.50	22

Benchmark Values for Triadimefon in Sediment (Fresh Water)

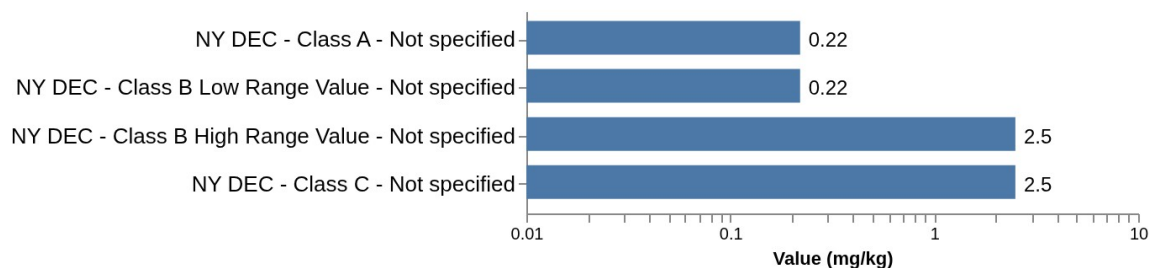


Table 243: Benchmark Values for Tribromophenol, 2,4,6- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
118-79-6	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.047
118-79-6	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.308

Benchmark Values for Tribromophenol, 2,4,6- in Sediment (Fresh Water)

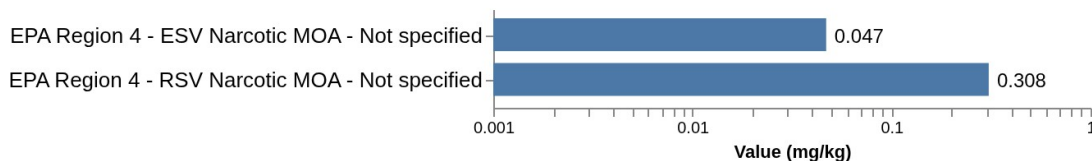


Table 244: Benchmark Values for Tributyltin Compounds in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
000000-01-6	Washington	Freshwater Sediment Cleanup Objective	Not specified	0.047
000000-01-6	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	0.320

Benchmark Values for Tributyltin Compounds in Sediment (Fresh Water)

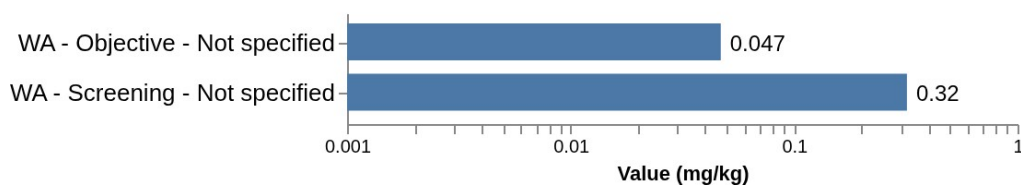


Table 245: Benchmark Values for Trichloro-1,2,2-trifluoroethane, 1,1,2- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
76-13-1	EPA Region 6	Sediment Freshwater	Not specified	2.78
76-13-1	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	9.74
76-13-1	EPA Region 6	Sediment Freshwater Second Effects	Not specified	16.70

Benchmark Values for Trichloro-1,2,2-trifluoroethane, 1,1,2- in Sediment (Fresh Water)

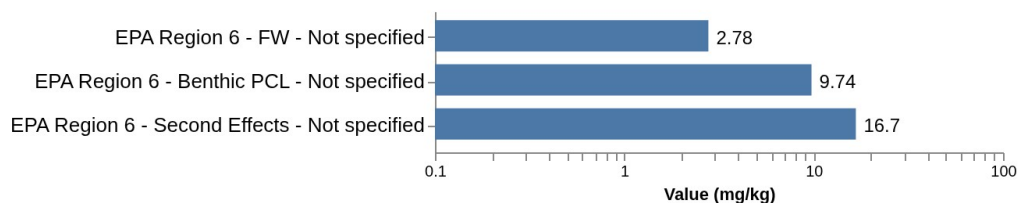


Table 246: Benchmark Values for Trichlorobenzene, 1,2,3- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
87-61-6	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.858	
87-61-6	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.113	
87-61-6	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.495	
87-61-6	New York DEC	Freshwater Sediment Class A	Not specified	0.230	23
87-61-6	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.230	
87-61-6	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	2.800	
87-61-6	New York DEC	Freshwater Sediment Class C	Not specified	2.800	22

Benchmark Values for Trichlorobenzene, 1,2,3- in Sediment (Fresh Water)

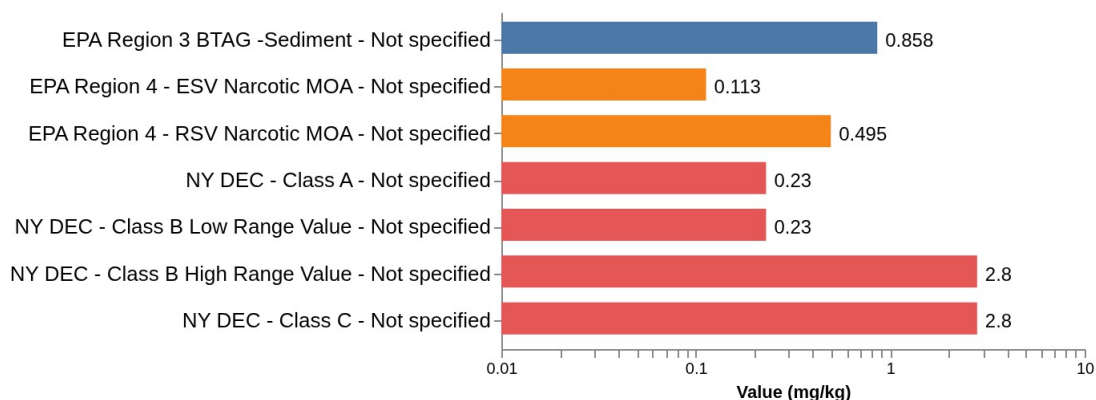


Table 247: Benchmark Values for Trichlorobenzene, 1,2,4- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
120-82-1	EPA Region 3	BTAG – Freshwater Sediment	Not specified	2.100	28
120-82-1	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.011	
120-82-1	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.485	
120-82-1	EPA Region 6	Sediment Freshwater	Not specified	0.880	
120-82-1	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	3.100	
120-82-1	EPA Region 6	Sediment Freshwater Second Effects	Not specified	5.310	
120-82-1	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	35.000	23
120-82-1	New York DEC	Freshwater Sediment Class A	Not specified	35.000	
120-82-1	New York DEC	Freshwater Sediment Class C	Not specified	55.000	
120-82-1	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	55.000	

Benchmark Values for Trichlorobenzene, 1,2,4- in Sediment (Fresh Water)

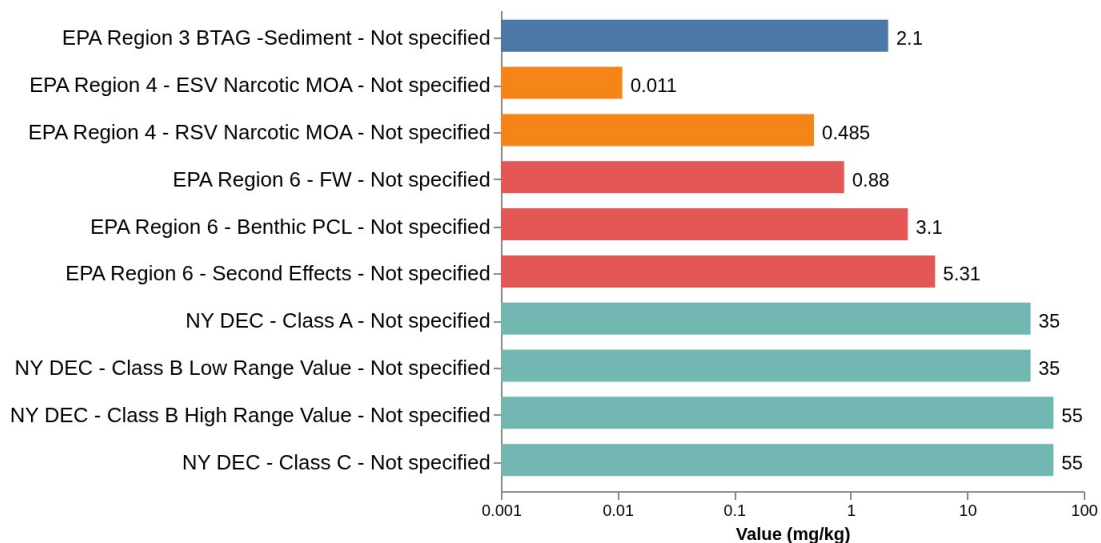
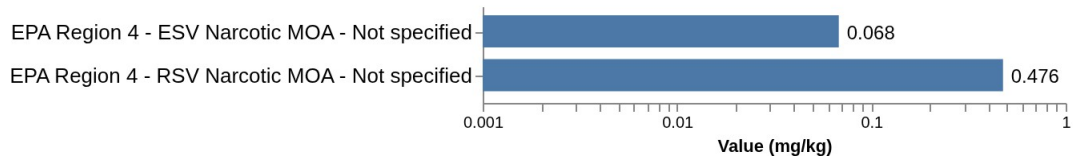


Table 248: Benchmark Values for Trichlorobenzene, 1,3,5- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
108-70-3	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.068
108-70-3	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.476

Benchmark Values for Trichlorobenzene, 1,3,5- in Sediment (Fresh Water)**Table 249: Benchmark Values for Trichlorobenzene in Sediment (Fresh Water)**

CAS	Source	Benchmark	Organism	Value (mg/kg)
12002-48-1	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.068
12002-48-1	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.476

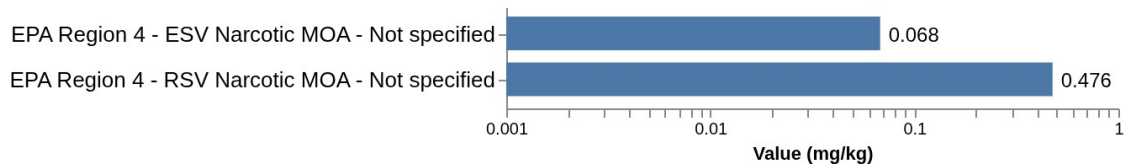
Benchmark Values for Trichlorobenzene in Sediment (Fresh Water)

Table 250: Benchmark Values for Trichloroethane, 1,1,1- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
71-55-6	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0302	28
71-55-6	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.0700	
71-55-6	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.3670	
71-55-6	EPA Region 6	Sediment Freshwater	Not specified	8.2700	
71-55-6	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	16.5300	
71-55-6	EPA Region 6	Sediment Freshwater Second Effects	Not specified	24.7900	
71-55-6	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	1.9000	
71-55-6	New York DEC	Freshwater Sediment Class A	Not specified	1.9000	23
71-55-6	New York DEC	Freshwater Sediment Class C	Not specified	3.5000	22
71-55-6	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	3.5000	

Benchmark Values for Trichloroethane, 1,1,1- in Sediment (Fresh Water)

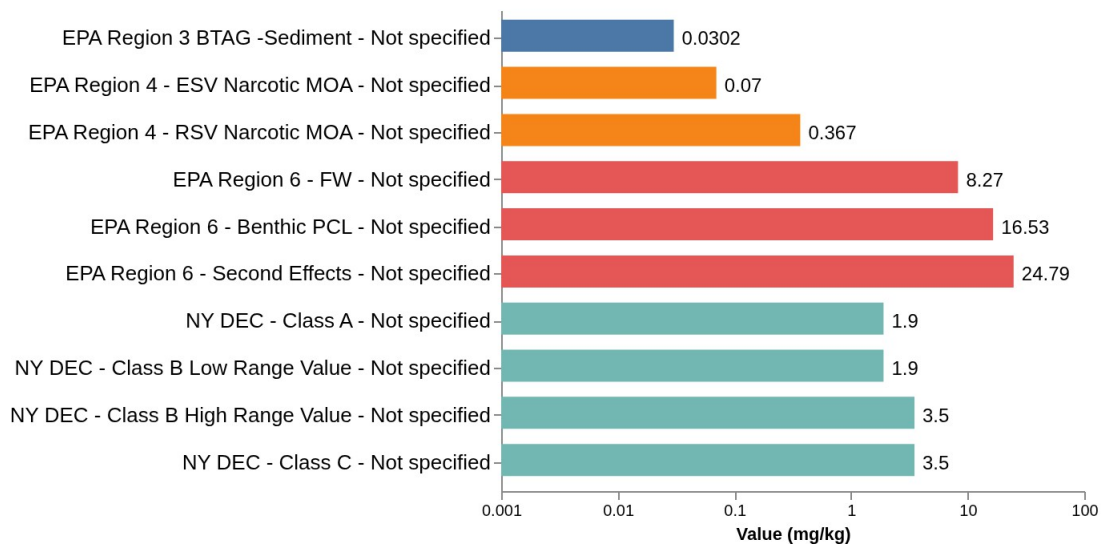


Table 251: Benchmark Values for Trichloroethane, 1,1,2- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
79-00-5	EPA Region 3	BTAG – Freshwater Sediment	Not specified	1.240	
79-00-5	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.538	
79-00-5	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	1.545	
79-00-5	EPA Region 6	Sediment Freshwater	Not specified	0.980	
79-00-5	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	3.430	
79-00-5	EPA Region 6	Sediment Freshwater Second Effects	Not specified	5.880	
79-00-5	New York DEC	Freshwater Sediment Class A	Not specified	1.900	23
79-00-5	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	1.900	
79-00-5	New York DEC	Freshwater Sediment Class C	Not specified	3.500	22
79-00-5	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	3.500	

Benchmark Values for Trichloroethane, 1,1,2- in Sediment (Fresh Water)

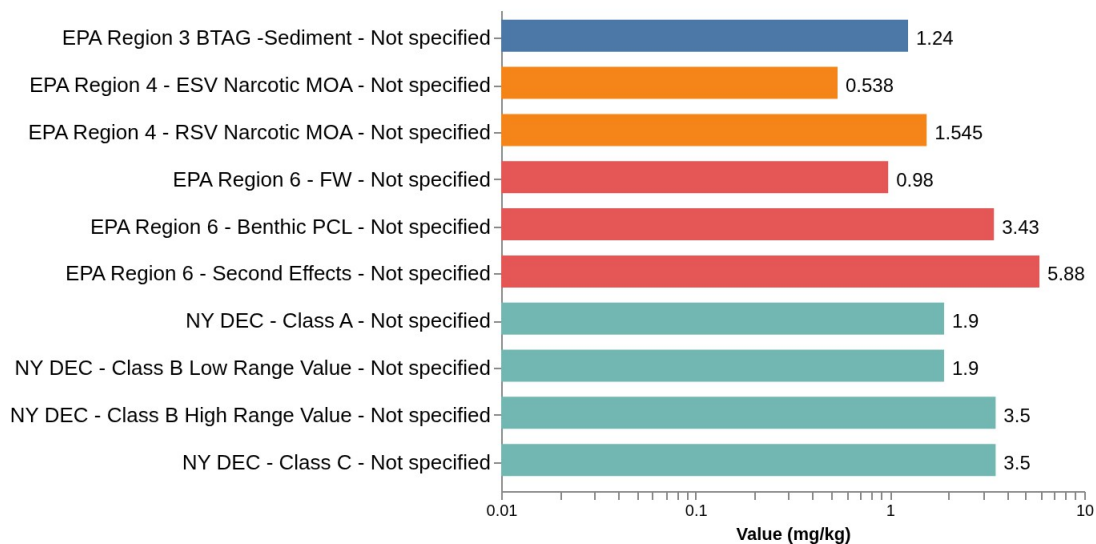


Table 252: Benchmark Values for Trichloroethylene in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
79-01-6	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0969	28
79-01-6	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.0780	
79-01-6	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.6920	
79-01-6	EPA Region 6	Sediment Freshwater	Not specified	4.5600	
79-01-6	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	9.1300	
79-01-6	EPA Region 6	Sediment Freshwater Second Effects	Not specified	13.6900	
79-01-6	New York DEC	Freshwater Sediment Class A	Not specified	1.8000	23
79-01-6	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	1.8000	
79-01-6	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	8.6000	
79-01-6	New York DEC	Freshwater Sediment Class C	Not specified	8.6000	

Benchmark Values for Trichloroethylene in Sediment (Fresh Water)

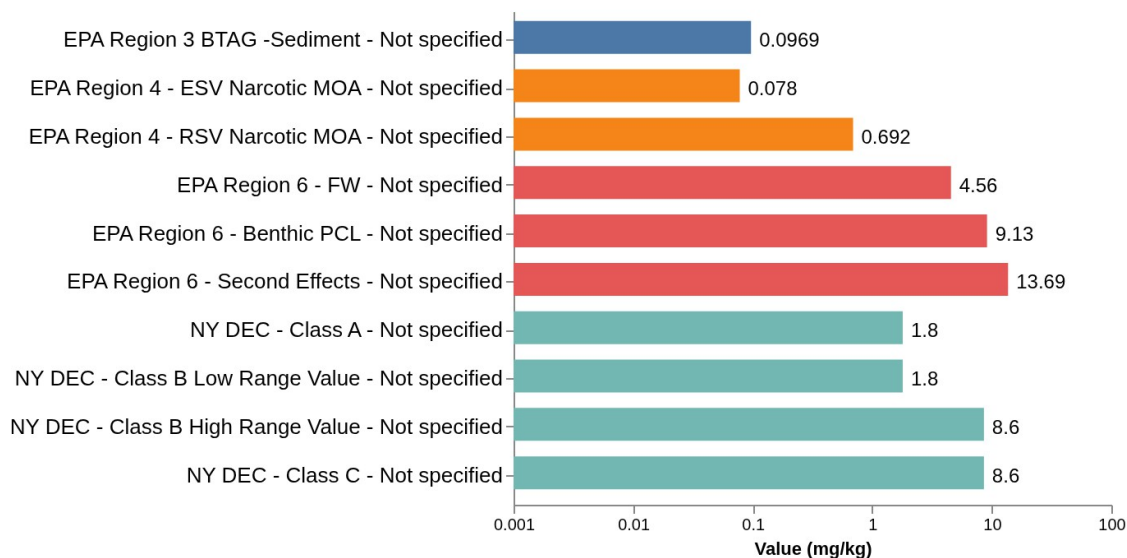


Table 253: Benchmark Values for Trichlorofluoromethane in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
75-69-4	EPA Region 6	Sediment Freshwater	Not specified	1.69
75-69-4	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	5.91
75-69-4	EPA Region 6	Sediment Freshwater Second Effects	Not specified	10.12

Benchmark Values for Trichlorofluoromethane in Sediment (Fresh Water)

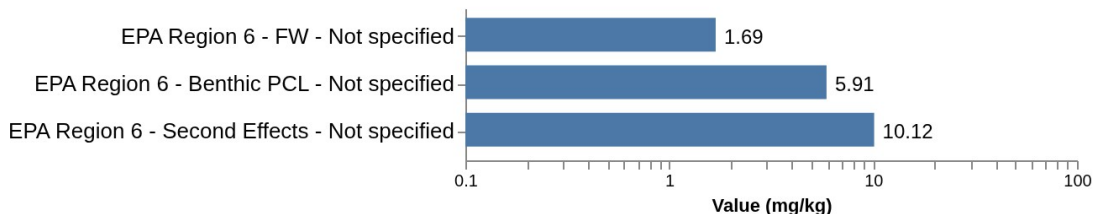


Table 254: Benchmark Values for Trichlorophenol, 2,4,5- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
95-95-4	EPA Region 4	Sediment ESV	Not specified	0.034
95-95-4	EPA Region 4	Freshwater Refinement Screening Value	Not specified	1.964

Benchmark Values for Trichlorophenol, 2,4,5- in Sediment (Fresh Water)

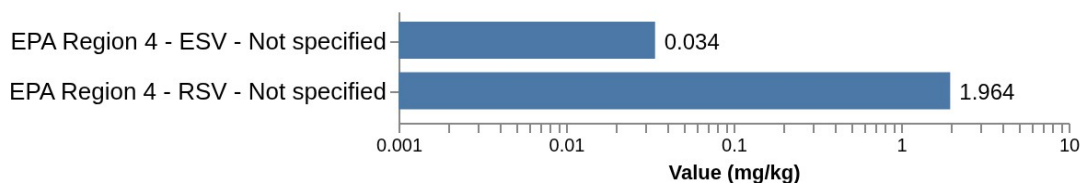


Table 255: Benchmark Values for Trichlorophenol, 2,4,6- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
88-06-2	EPA Region 3	BTAG - Freshwater Sediment	Not specified	0.213
88-06-2	EPA Region 4	Sediment ESV	Not specified	0.089
88-06-2	EPA Region 4	Freshwater Refinement Screening Value	Not specified	1.964

Benchmark Values for Trichlorophenol, 2,4,6- in Sediment (Fresh Water)

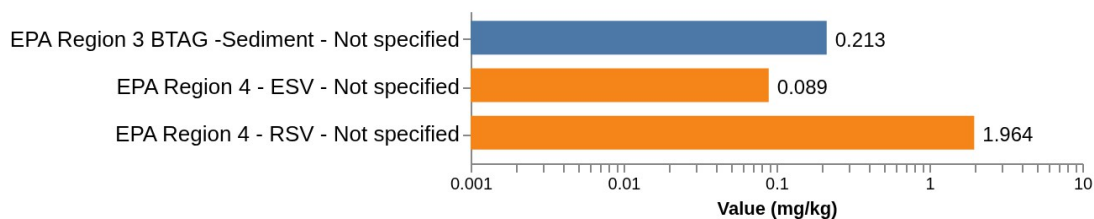


Table 256: Benchmark Values for Trichlorophenoxyacetic Acid, 2,4,5- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
93-76-5	EPA Region 3	BTAG – Freshwater Sediment	Not specified	12.3

Benchmark Values for Trichlorophenoxyacetic Acid, 2,4,5- in Sediment (Fresh Water)



Table 257: Benchmark Values for Trichlorophenoxypropionic acid, -2,4,5 in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
93-72-1	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.675
93-72-1	EPA Region 4	Sediment ESV	Not specified	0.062
93-72-1	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.184

Benchmark Values for Trichlorophenoxypropionic acid, -2,4,5 in Sediment (Fresh Water)

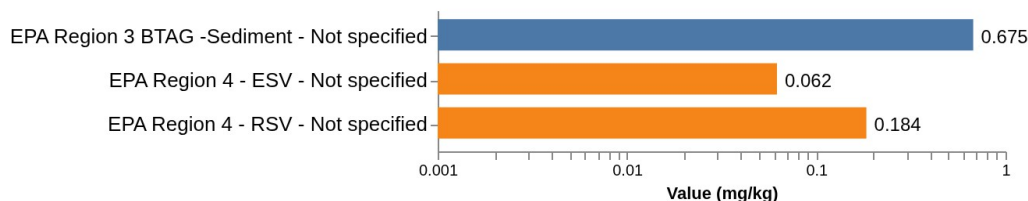


Table 258: Benchmark Values for Trifluralin in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
1582-09-8	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.355	
1582-09-8	EPA Region 4	Sediment ESV	Not specified	0.079	7
1582-09-8	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.493	7

Benchmark Values for Trifluralin in Sediment (Fresh Water)

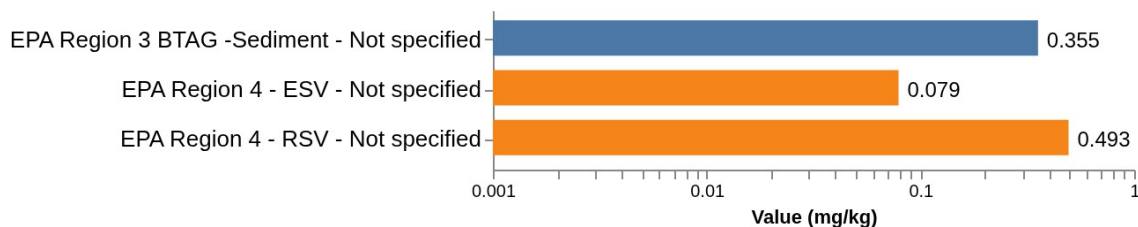


Table 259: Benchmark Values for Trimethylbenzene, 1,2,3- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
526-73-8	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.368

Benchmark Values for Trimethylbenzene, 1,2,3- in Sediment (Fresh Water)

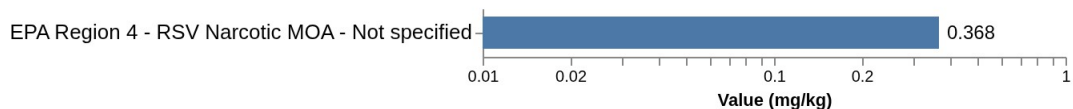


Table 260: Benchmark Values for Trimethylbenzene, 1,2,4- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
95-63-6	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.097	
95-63-6	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.361	
95-63-6	EPA Region 6	Sediment Freshwater	Not specified	0.760	
95-63-6	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	2.670	
95-63-6	EPA Region 6	Sediment Freshwater Second Effects	Not specified	4.580	
95-63-6	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	3.400	
95-63-6	New York DEC	Freshwater Sediment Class A	Not specified	3.400	23
95-63-6	New York DEC	Freshwater Sediment Class C	Not specified	30.000	22
95-63-6	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	30.000	

Benchmark Values for Trimethylbenzene, 1,2,4- in Sediment (Fresh Water)

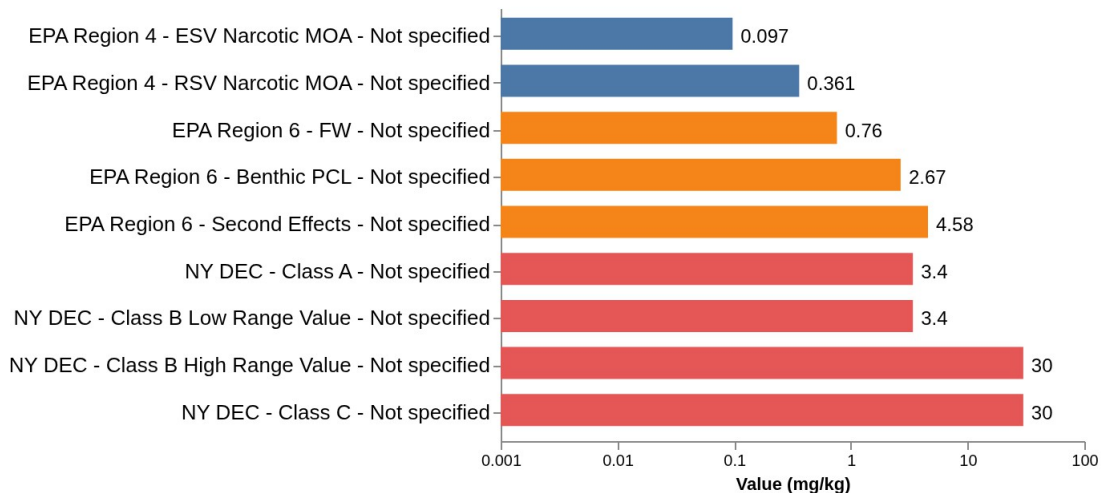


Table 261: Benchmark Values for Trimethylbenzene, 1,3,5- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
108-67-8	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.164
108-67-8	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	0.354
108-67-8	EPA Region 6	Sediment Freshwater	Not specified	0.770
108-67-8	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	2.680
108-67-8	EPA Region 6	Sediment Freshwater Second Effects	Not specified	4.590

Benchmark Values for Trimethylbenzene, 1,3,5- in Sediment (Fresh Water)

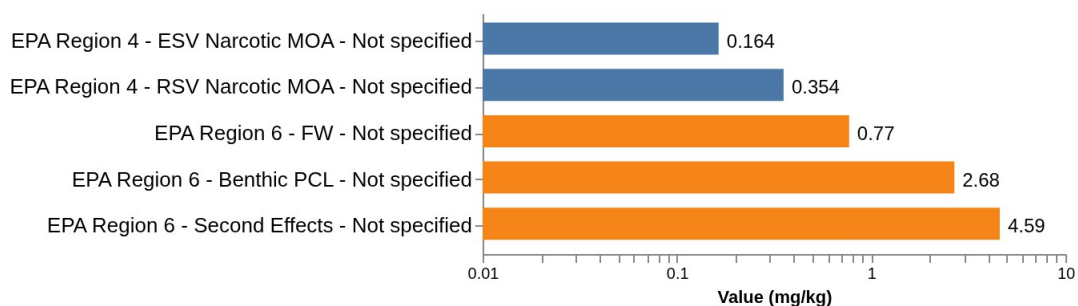


Table 262: Benchmark Values for Tri-n-butyltin in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
688-73-3	EPA Region 4	Sediment ESV	Not specified	0.047
688-73-3	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.320

Benchmark Values for Tri-n-butyltin in Sediment (Fresh Water)

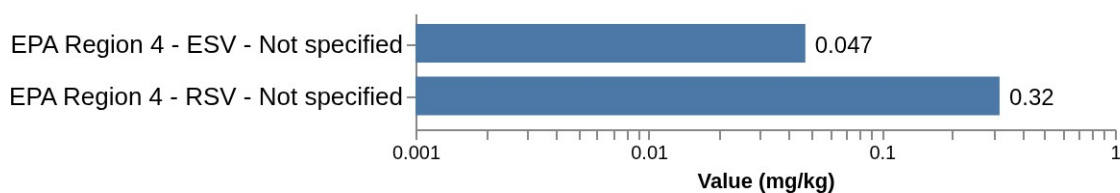


Table 263: Benchmark Values for Trinitrobenzene, 1,3,5- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
99-35-4	EPA Region 4	Sediment ESV	Not specified	0.015
99-35-4	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.116
99-35-4	EPA Region 6	Sediment Freshwater	Not specified	0.010
99-35-4	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.030
99-35-4	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.040

Benchmark Values for Trinitrobenzene, 1,3,5- in Sediment (Fresh Water)

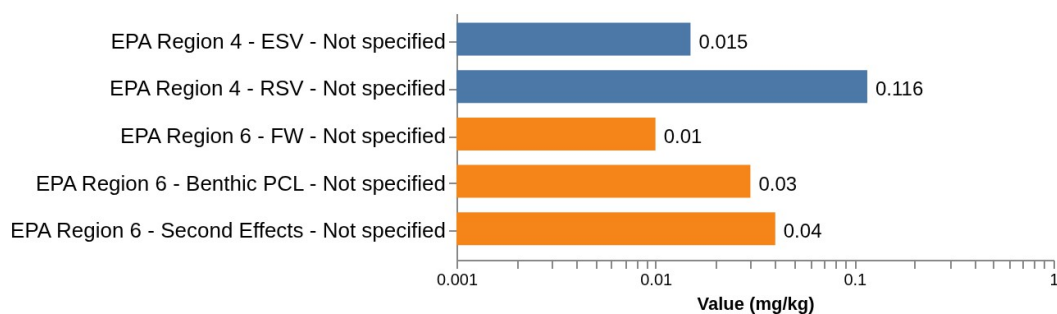


Table 264: Benchmark Values for Trinitrotoluene, 2,4,6- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
118-96-7	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.092
118-96-7	EPA Region 4	Sediment ESV	Not specified	0.027
118-96-7	EPA Region 4	Freshwater Refinement Screening Value	Not specified	0.112
118-96-7	EPA Region 6	Sediment Freshwater	Not specified	0.180
118-96-7	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.620
118-96-7	EPA Region 6	Sediment Freshwater Second Effects	Not specified	1.060

Benchmark Values for Trinitrotoluene, 2,4,6- in Sediment (Fresh Water)

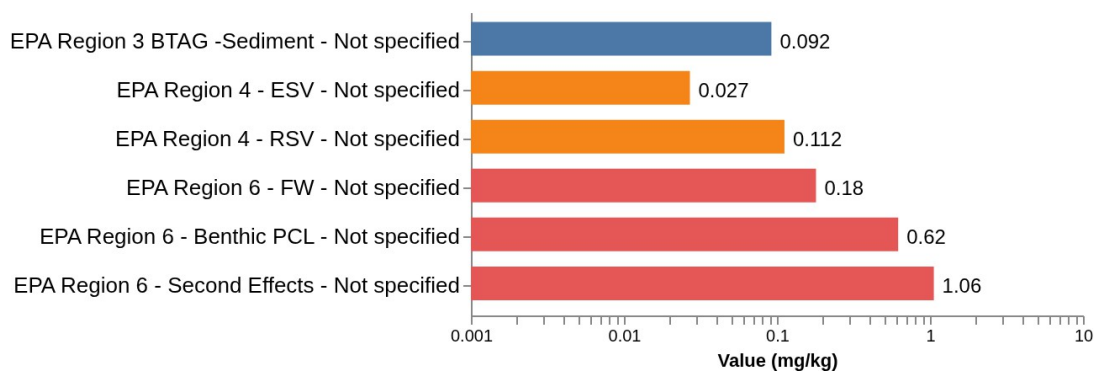


Table 265: Benchmark Values for Triphenyl phosphate in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
115-86-6	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.07

Benchmark Values for Triphenyl phosphate in Sediment (Fresh Water)

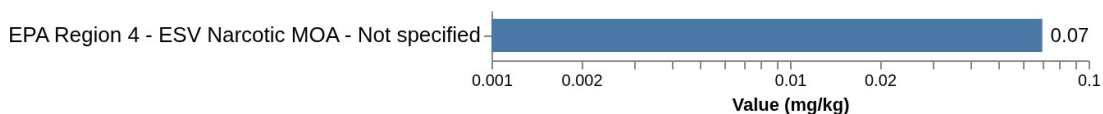


Table 266: Benchmark Values for Uranium (Soluble Salts) in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
7440-61-1	EPA Region 4	Sediment ESV	Not specified	100.0
7440-61-1	EPA Region 4	Freshwater Refinement Screening Value	Not specified	1000.0

Benchmark Values for Uranium (Soluble Salts) in Sediment (Fresh Water)

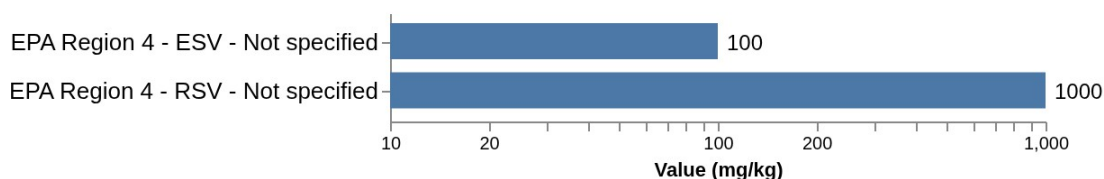


Table 267: Benchmark Values for Vinyl Acetate in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
108-05-4	EPA Region 4	Sediment ESV	Not specified	0.0057
108-05-4	EPA Region 4	Freshwater Refinement Screening Value	Not specified	2.2300
108-05-4	EPA Region 6	Sediment Freshwater	Not specified	0.0100
108-05-4	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.0900
108-05-4	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.1790

Benchmark Values for Vinyl Acetate in Sediment (Fresh Water)

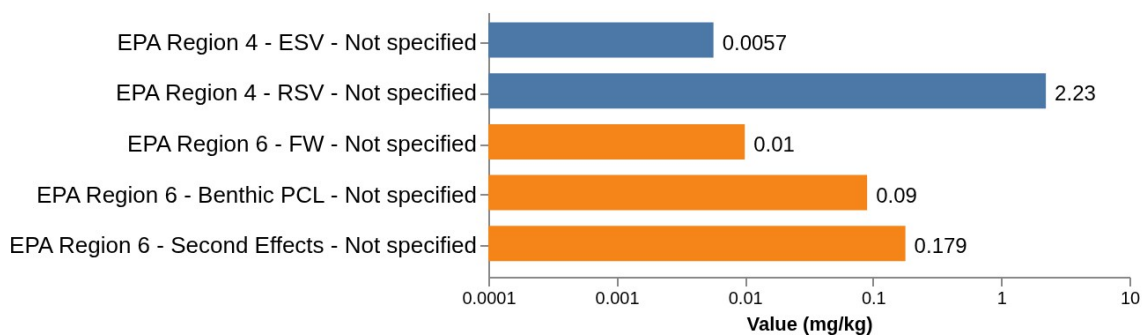


Table 268: Benchmark Values for Vinyl Chloride in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)
75-01-4	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.482
75-01-4	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	1.178
75-01-4	EPA Region 6	Sediment Freshwater	Not specified	1.390
75-01-4	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	2.790
75-01-4	EPA Region 6	Sediment Freshwater Second Effects	Not specified	4.180

Benchmark Values for Vinyl Chloride in Sediment (Fresh Water)

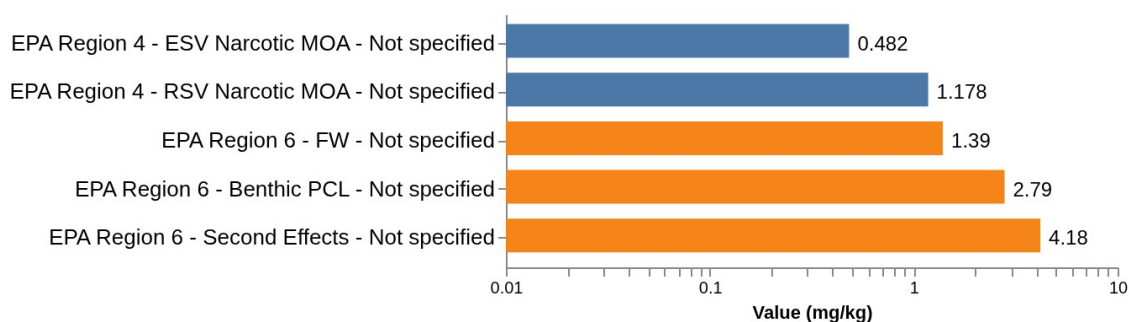


Table 269: Benchmark Values for Xylene, m- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
108-38-3	EPA Region 3	BTAG – Freshwater Sediment	Not specified	0.0252	
108-38-3	EPA Region 6	Sediment Freshwater	Not specified	0.0046	
108-38-3	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	0.0400	
108-38-3	EPA Region 6	Sediment Freshwater Second Effects	Not specified	0.0810	
108-38-3	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.4800	
108-38-3	New York DEC	Freshwater Sediment Class A	Not specified	0.4800	23
108-38-3	New York DEC	Freshwater Sediment Class C	Not specified	4.2000	22
108-38-3	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	4.2000	

Benchmark Values for Xylene, m- in Sediment (Fresh Water)

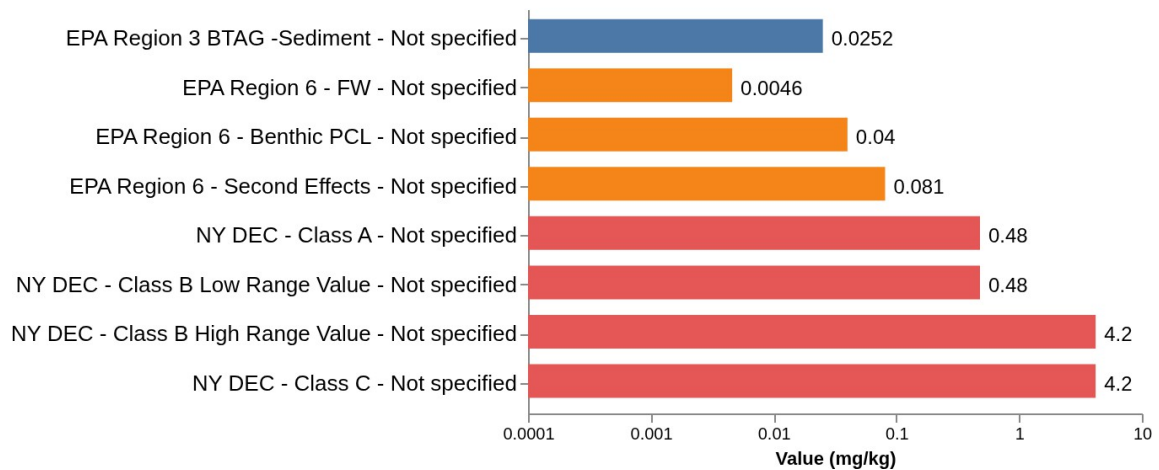


Table 270: Benchmark Values for Xylene, o- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
95-47-6	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.82	
95-47-6	New York DEC	Freshwater Sediment Class A	Not specified	0.82	23
95-47-6	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	7.20	
95-47-6	New York DEC	Freshwater Sediment Class C	Not specified	7.24	22

Benchmark Values for Xylene, o- in Sediment (Fresh Water)

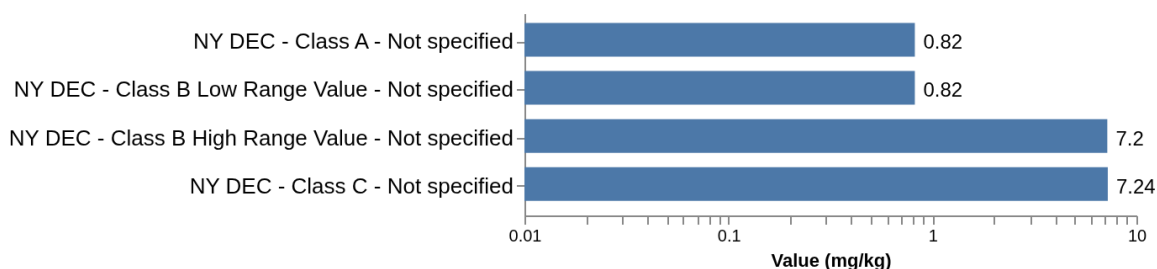


Table 271: Benchmark Values for Xylene, p- in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
106-42-3	New York DEC	Freshwater Sediment Class A	Not specified	0.53	23
106-42-3	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.53	
106-42-3	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	4.70	
106-42-3	New York DEC	Freshwater Sediment Class C	Not specified	4.70	22

Benchmark Values for Xylene, p- in Sediment (Fresh Water)

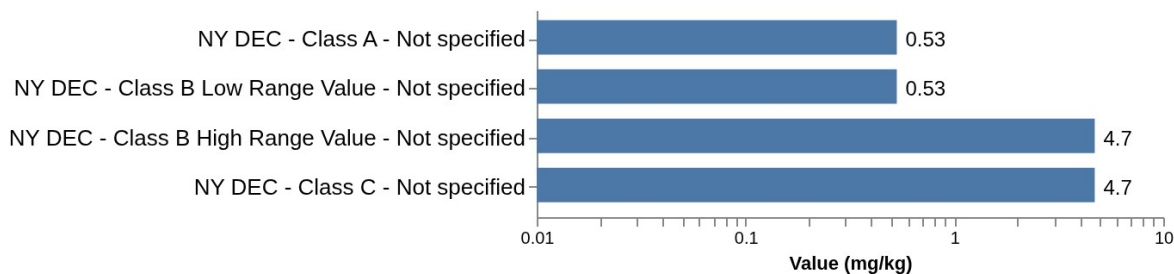


Table 272: Benchmark Values for Xylenes in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
1330-20-7	EPA Region 4	Freshwater ESV Narcotic MOA	Not specified	0.130	28
1330-20-7	EPA Region 4	Freshwater RSV Narcotic MOA	Not specified	1.074	
1330-20-7	EPA Region 6	Sediment Freshwater	Not specified	4.000	
1330-20-7	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	8.010	
1330-20-7	EPA Region 6	Sediment Freshwater Second Effects	Not specified	12.010	
1330-20-7	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	0.590	
1330-20-7	New York DEC	Freshwater Sediment Class A	Not specified	0.590	23
1330-20-7	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	5.200	
1330-20-7	New York DEC	Freshwater Sediment Class C	Not specified	5.200	22

Benchmark Values for Xylenes in Sediment (Fresh Water)

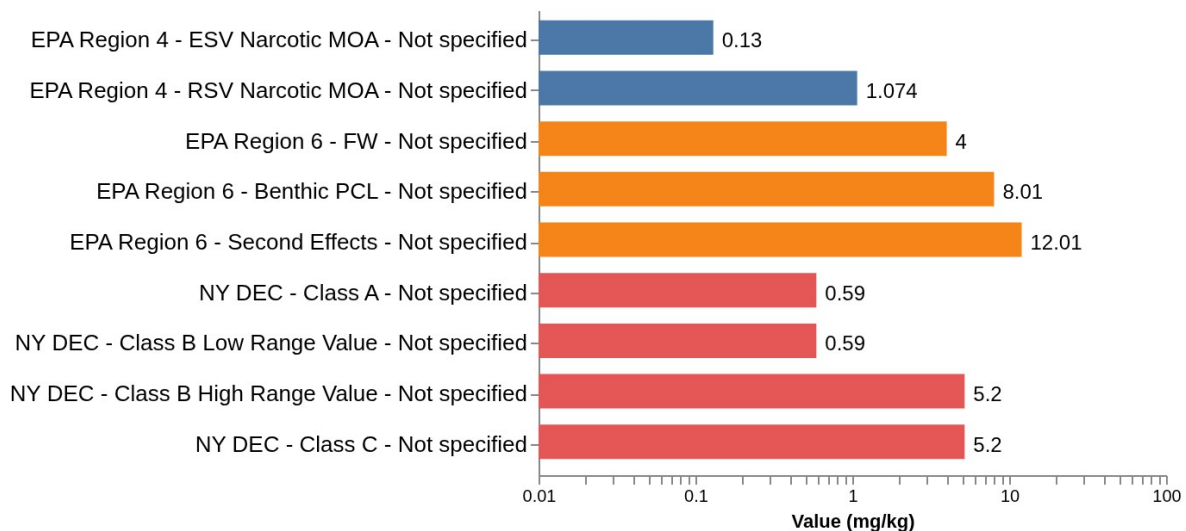
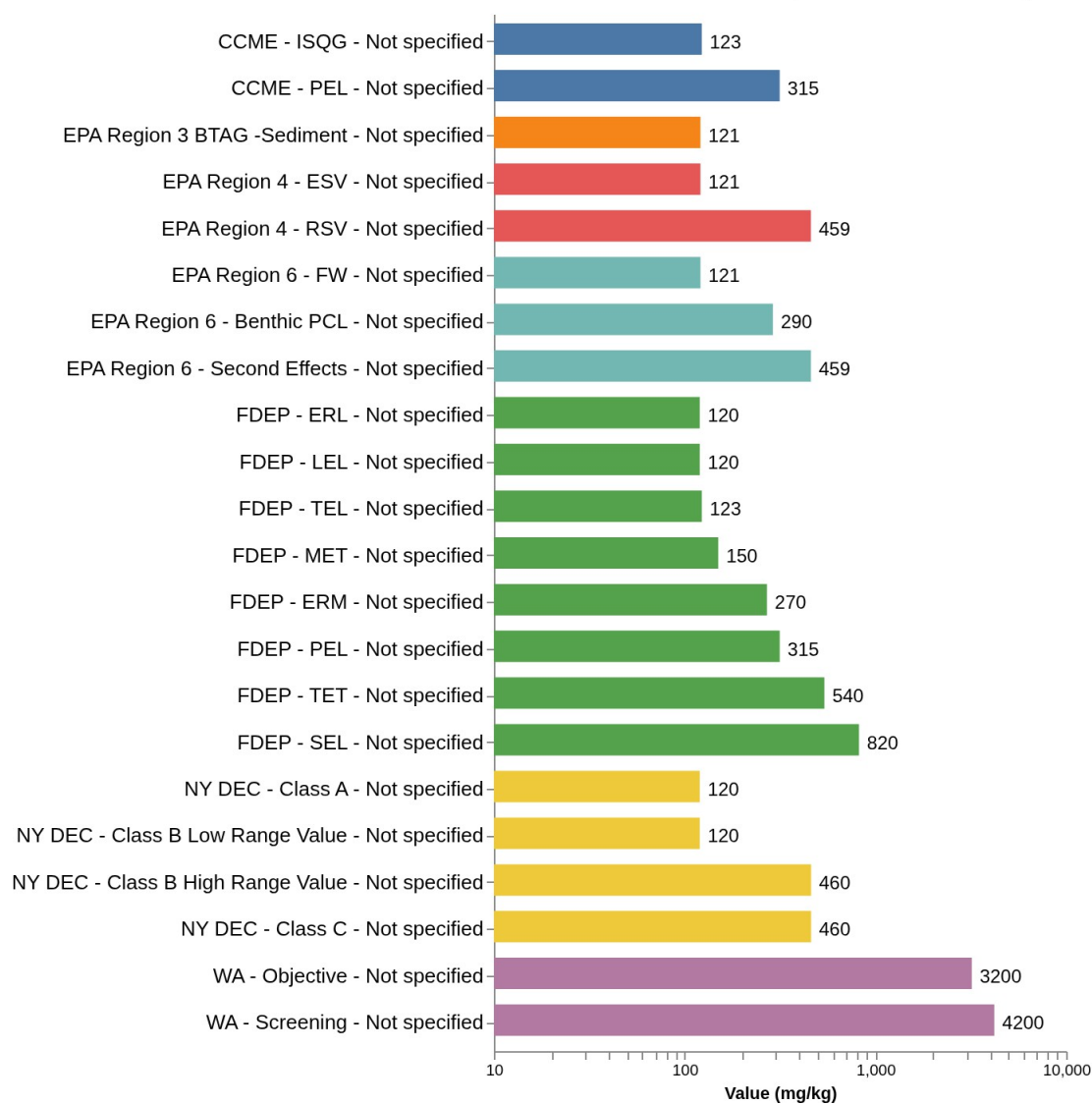


Table 273: Benchmark Values for Zinc and Compounds in Sediment (Fresh Water)

CAS	Source	Benchmark	Organism	Value (mg/kg)	Footnotes
7440-66-6	Canada	Sediment Freshwater ISQG	Not specified	123.0	
7440-66-6	Canada	Sediment Freshwater PEL	Not specified	315.0	
7440-66-6	EPA Region 3	BTAG – Freshwater Sediment	Not specified	121.0	
7440-66-6	EPA Region 4	Sediment ESV	Not specified	121.0	
7440-66-6	EPA Region 4	Freshwater Refinement Screening Value	Not specified	459.0	
7440-66-6	EPA Region 6	Sediment Freshwater	Not specified	121.0	
7440-66-6	EPA Region 6	Sediment Freshwater Benthic PCL	Not specified	290.0	
7440-66-6	EPA Region 6	Sediment Freshwater Second Effects	Not specified	459.0	
7440-66-6	Florida	Freshwater LEL	Not specified	120.0	
7440-66-6	Florida	Freshwater ERL	Not specified	120.0	
7440-66-6	Florida	Freshwater TEL	Not specified	123.0	
7440-66-6	Florida	Freshwater MET	Not specified	150.0	
7440-66-6	Florida	Freshwater ERM	Not specified	270.0	
7440-66-6	Florida	Freshwater PEL	Not specified	315.0	
7440-66-6	Florida	Freshwater TET	Not specified	540.0	
7440-66-6	Florida	Freshwater SEL	Not specified	820.0	
7440-66-6	New York DEC	Freshwater Sediment Class B Low Range Value	Not specified	120.0	
7440-66-6	New York DEC	Freshwater Sediment Class A	Not specified	120.0	23
7440-66-6	New York DEC	Freshwater Sediment Class C	Not specified	460.0	22
7440-66-6	New York DEC	Freshwater Sediment Class B High Range Value	Not specified	460.0	
7440-66-6	Washington	Freshwater Sediment Cleanup Objective	Not specified	3200.0	
7440-66-6	Washington	Freshwater Sediment Cleanup Screening Level	Not specified	4200.0	22

Benchmark Values for Zinc and Compounds in Sediment (Fresh Water)



3. CHEMICAL FOOTNOTES

1. Screening value is for filtered (dissolved) metals. A conversion factor (CF) was used to convert the screening value for total metals in surface water to a screening value for dissolved metals in surface water. $CMC (dissolved) = CMC (total) \times CF$.
2. The freshwater screening value is hardness dependent. The screening value shown is for dissolved metals assuming a hardness of 50 mg/L as CaCO₃. See [Table 1C for screening values for varying degrees of water hardness](#).
3. Freshwater criteria for pentachlorophenol are pH Dependent. Values displayed are for a pH of 7.8.
4. Criteria for ammonia are pH, temperature, and lifestage dependent.
5. Selenium concentrations in water do not reflect dietary sources to aquatic life and screening against these numbers may not be adequately protective.
6. pH of 6.5–9.0
7. Bioaccumulative chemical
8. Sum for the Toxic Unit Approach. (See Table 2c at [Region 4 Ecological Risk Assessment Supplemental Guidance](#))
9. Total value for Low Molecular Weight PAHs.
10. Total value for High Molecular Weight PAHs.
11. Subject to a narrative assessment. See [Region 4 Ecological Risk Assessment Supplemental Guidance](#).
12. For hardness-dependent metals, freshwater chronic criteria are based on soft water with a total hardness of 50 mg/L as CaCO₃. Soft water is common within Region 5; this water ESL may be recalculated when site specific water hardness is less than 50 mg/L.
13. Freshwater criteria for pentachlorophenol are pH Dependent. Values displayed are for a pH of 6.5.
14. The freshwater BTAG for Hydrazine depends on the hardness level. For hardness < 50, the BTAG is 5 ug/L. For hardness => 50, the BTAG is 10 ug/L.
15. Potential ecological risks associated with aluminum in soils are based on the measured soil pH. Where aluminum is a COC, it should only be retained for those soils with a pH less than 5.5. U.S. EPA. 2003. Ecological soil screening level for aluminum. Interim final. OSWER directive 9285.7–60. Washington.
16. Iron is not expected to be toxic to plants in well-aerated soils between pH 5 and 8. Importance is based less on its direct chemical toxicity than on its effect as a mediator in the geochemistry of other toxic metals and the physical hazard of depositing flocculent. EPA. 2003. Ecological soil screening levels for iron. Interim final. OSWER directive 9285.7–69. Washington.
17. When benchmarks represent the sum of individual compounds, isomers, or groups of congeners, and the chemical analysis indicates an undetected value, the proxy value specified at 30 TAC 350.51(n) shall be used for calculating the sum of the respective compounds, isomers, or congeners. This assumes that the particular COC has not been eliminated in accordance with the criteria at 350.71(k).
18. The low molecular weight PAH benchmark is to be compared to the sum of the concentrations of the following compounds: naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, and 2-methyl naphthalene. The PAH benchmark is not the sum of the corresponding benchmarks listed for the individual compounds
19. The high molecular weight PAH benchmark is to be compared to the sum of the concentrations of the following compounds: fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene, and dibenzo(a,h)anthracene. The PAH benchmark is not the sum of the corresponding benchmarks listed for the individual compounds.
20. Total PAH refers to the sum of the concentrations of each of low and high molecular weight PAHs listed above and any other PAH compounds that are not eliminated in accordance with 30 TAC 350.71(k). The benchmarks for total PAHs are the most relevant in evaluating risk in an ERA, as PAHs almost always occur as mixtures. Values for individual, low molecular weight, and high molecular weight PAHs are included as guidelines to aid in the determination of disproportionate concentrations within the mixture that may be masked by the total.
21. Indicates that the benchmarks are for the dissolved portion in water.

22. Value was reported as greater than the listed number.
23. Value was reported as less than the listed number.
24. These values are estimates. Methods of estimation are described in [Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota: 1996 Revision](#).
25. A range of 0.8 to 4.0 $\mu\text{g/L}$ was reported.
26. The chronic NAWQC for mercury (0.012 $\mu\text{g/L}$) is based on the final residue value. FCVs are used as benchmarks to protect aquatic life.
27. The chronic NAWQC for DDT (0.001 $\mu\text{g/L}$), total PCBs (0.014 $\mu\text{g/L}$), and heptachlor (0.0038 $\mu\text{g/l}$) are based on the final residue values; for benchmarks to protect aquatic life, we use SCVs.
28. Units are in mg/Kg dry weight.
29. These values are estimates. Methods of estimation are described in the [reference](#).
30. Study LC50s were used rather than species mean LC50s, so water hardness would correspond to EC20 values.
31. Benchmarks are based on tests that are not standard but are judged to be of high quality.
32. The value's sediment quality assessment guidelines (SQAGs) are within a factor of three of the probable effects level (PEL).
33. These values have a presumed maximum TOC of 10% (0.1) applied to the values from the source for use in comparing to bulk sediment data. If the TOC in measured data is less than 10%, adjust values accordingly.
34. These values have a presumed TOC of 1% (0.01) applied to the values from the source for use in comparing to bulk sediment data.
35. See Methylmercury.
36. Consult the 2010 Polycyclic Aromatic Hydrocarbons factsheet or the 2010 PAH Scientific Supporting Document for guidance.
37. Surface Coarse 0.082 mg/kg. Surface Fine 0.018 mg/kg. Subsoil Coarse 0.082 mg/kg. Subsoil Fine 0.018 mg/kg.
38. Coarse Soil Guideline 4.6 mg/kg. Fine Soil Guideline 5.6 mg/kg. Coarse Soil Human health soil quality guideline 4.6 mg/kg. Fine Soil Human health soil quality guideline 4.6 mg/kg. Coarse Soil Environmental soil quality guideline 7.7 mg/kg. Fine Soil Environmental soil quality guideline 190 mg/kg.
39. SQGF Coarse 0.49 mg/kg. SQGF Fine 6.5 mg/kg.
40. Surface Coarse 0.37 mg/kg. Surface Fine 0.08 mg/kg. Subsoil Coarse 0.37 mg/kg. Subsoil Fine 0.08 mg/kg.
41. Surface Coarse 11 mg/kg. Surface Fine 2.4 mg/kg. Subsoil Coarse 11 mg/kg. Subsoil Fine 2.4 mg/kg.
42. 10–5 Incremental Risk – Surface Coarse 0.030 mg/kg. 10–5 Incremental Risk – Surface Fine 0.0068 mg/kg. 10–5 Incremental Risk – Subsoil Coarse 0.030 mg/kg. 10–5 Incremental Risk – Subsoil Fine 0.0068 mg/kg. 10–6 Incremental Risk – Surface Coarse 0.030 mg/kg. 10–6 Incremental Risk – Surface Fine 0.0068 mg/kg. 10–6 Incremental Risk – Subsoil Coarse 0.030 mg/kg. 10–6 Incremental Risk – Subsoil Fine 0.0068 mg/kg.
43. SQGF Coarse 6.5 mg/kg. SQGF Fine 21 mg/kg.
44. 10–5 Incremental Risk – Surface Coarse 0.030 mg/kg. 10–5 Incremental Risk – Surface Fine 0.0068 mg/kg. 10–5 Incremental Risk – Subsoil Coarse 0.030 mg/kg. 10–5 Incremental Risk – Subsoil Fine 0.0068 mg/kg. 10–6 Incremental Risk – Surface Coarse 0.0095 mg/kg. 10–6 Incremental Risk – Surface Fine 0.0068 mg/kg. 10–6 Incremental Risk – Subsoil Coarse 0.011 mg/kg. 10–6 Incremental Risk – Subsoil Fine 0.0068 mg/kg.
45. This value was derived using TEFs. See the fact sheet for supporting documentation.
46. 500 $\mu\text{g/L}$ for blackberries; 500–1000 $\mu\text{g/L}$ for peaches, cherries, plums, grapes, cowpeas, onions, garlic, sweet potatoes, wheat barley, sunflowers, mung beans, sesame, lupins, strawberries, Jerusalem artichokes, kidney beans, and lima beans; 1000–2000 $\mu\text{g/L}$ for red peppers, peas, carrots, radishes, potatoes, and cucumbers; 2000–4000 $\mu\text{g/L}$ for lettuce, cabbage, celery, turnips, Kentucky bluegrass, oats, corn, artichokes, tobacco, mustard, clover, squash, and muskmelons; 4000–6000 $\mu\text{g/L}$ for sorghum, tomatoes, alfalfa, purple vetch, parsley, red beets, and sugar beets; 6000 $\mu\text{g/L}$ for asparagus.
47. Foliar: 100–178 mg/L for almond apricots and plums; 178–355 mg/L for grapes, peppers, potatoes and tomatoes; 355–710 mg/L for alfalfa, barley, corn, and cucumbers; >710 mg/L for cauliflower, cotton, safflower, sesame, sorghum, sugar beets, and sunflowers. Rootstocks: 180–600 mg/L for stone fruit

- (peaches, plums, etc.); 710–900 mg/L for grapes. Cultivars: 110–180 mg/L for strawberries, 230–460 mg/L for grapes, 250 mg/L for boysenberries, blackberries, and raspberries.
48. 200 µg/L for cereals, 1000 µg/L for tolerant crops.
 49. The concentration should not exceed 10 µg/L for continuous use on all soils or 50 µg/L for short-term use on acidic soils.
 50. 20 µg/L for continuous use on all soils, 50 µg/L for intermittent use on all soils.
 51. 500 mg/L for strawberries, raspberries, beans, and carrots. 500–800 mg/L for boysenberries, currants, blackberries, gooseberries, plums, grapes, apricots, peaches, pears, cherries, apples, onions, parsnips, radishes, peas, pumpkins, lettuce, peppers, muskmelons, sweet potatoes, sweet corn, potatoes, celery, cabbage, kohlrabi, cauliflower, cowpeas, broad beans, flax, sunflowers, and corn. 800–1500 mg/L for spinach, cantaloupe, cucumbers, tomatoes, squash, brussels, sprouts, broccoli, turnips, smooth brome, alfalfa, big trefoil, beardless wildrye, vetch, timothy, and crested wheat grass. 1500–2500 mg/L for beets, zucchini, rape, sorghum, oat hay, wheat hay, mountain brome, tall fescue, sweet clover, reed canary grass, birdsfoot trefoil, perennial ryegrass. 3500 mg/L for asparagus, soybeans, safflower, oats, rye, wheat, sugar beets, barley, barley hay, and tall wheat grass.
 52. 1000 µg/L when soil pH < 6.5. 5000 µg/L when soil pH > 6.5.
 53. 500 µg/L for sheep, 1000 µg/L for cattle, 5000 µg/L for swine and poultry.
 54. The maximum concentration in livestock drinking water should not exceed 2000 µg/L, or 1000 µg/L in cases where the feed of animals contains fluoride.
 55. The short-term benchmark concentration of 1.0 µg·L⁻¹ is for waters of 50 mg CaCO₃·L⁻¹ hardness. The short-term benchmark for cadmium is related to water hardness (as CaCO₃): When the water hardness is 0 to < 5.3 mg/L, the short-term benchmark is 0.11 µg/L. At hardness ≥ 5.3 to ≤ 360 mg/L, the short-term benchmark is calculated using this equation: Short-term benchmark (µg/L) = 10 / {1.016(log[hardness]) – 1.71}. At hardness > 360 mg/L, the short-term benchmark is 7.7 µg/L.
 56. Benchmark = exp(0.878[ln(hardness)] + 4.76), where the benchmark is expressed in dissolved manganese concentration (µg/L), and hardness is measured as CaCO₃ equivalents in mg/L.
 57. 5 µg/L if pH < 6.5. 100 µg/L if pH ≥ 6.5.
 58. The CWQG for cadmium (i.e., long-term guideline) of 0.09 µg·L⁻¹ is for waters of 50 mg CaCO₃·L⁻¹ hardness. The CWQG for cadmium is related to water hardness (as CaCO₃): When the water hardness is > 0 to < 17 mg/L, the CWQG is 0.04 µg/L. At hardness ≥ 17 to ≤ 280 mg/L, the CWQG is calculated using this equation: CWQG (µg/L) = 10 / {0.83(log[hardness]) – 2.46}. At hardness > 280 mg/L, the CWQG is 0.37 µg/L.
 59. The CWQG for copper is related to water hardness (as CaCO₃): When the water hardness is 0 to < 82 mg/L, the CWQG is 2 µg/L. At hardness ≥ 82 to ≤ 180 mg/L the CWQG is calculated using this equation: CWQG (µg/L) = 0.2 * e / {0.8545[ln(hardness)] – 1.465}. At hardness > 180 mg/L, the CWQG is 4 µg/L. If the hardness is unknown, the CWQG is 2 µg/L.
 60. The CWQG for lead is related to water hardness (as CaCO₃): When the hardness is 0 to ≤ 60 mg/L, the CWQG is 1 µg/L. At hardness > 60 to ≤ 180 mg/L the CWQG is calculated using this equation: CWQG (µg/L) = e / {1.273[ln(hardness)] – 4.705}. At hardness > 180 mg/L, the CWQG is 7 µg/L. If the hardness is unknown, the CWQG is 1 µg/L.
 61. The CWQG for manganese (i.e., long-term guideline) is found using the CWQG calculator in Appendix B of the Scientific Criteria Document for the Development of the Canadian Water Quality Guidelines for the Protection of Aquatic Life: Manganese.
 62. The CWQG for nickel is related to water hardness (as CaCO₃): When the water hardness is 0 to ≤ 60 mg/L, the CWQG is 25 µg/L. At hardness > 60 to ≤ 180 mg/L the CWQG is calculated using this equation: CWQG (µg/L) = e / {0.76[ln(hardness)] + 1.06}. At hardness > 180 mg/L, the CWQG is 150 µg/L. If the hardness is unknown, the CWQG is 25 µg/L.
 63. Canadian Guidance Framework for Phosphorus is for developing phosphorus guidelines (does not provide guidance on other freshwater nutrients). It provides Trigger Ranges for Total Phosphorus (µg/L) (see Guidance Framework for Phosphorus factsheet): ultra-oligotrophic <4, oligotrophic 4–10, mesotrophic 10–20, meso-eutrophic 20–35, eutrophic 35–100, hyper-eutrophic >100.
 64. The long-term CWQG is for dissolved zinc and is calculated using the following equation: CWQG = exp(0.947[ln(hardness mg·L⁻¹)] – 0.815[pH] + 0.398[ln(DOC mg·L⁻¹)] + 4.625). The short-term benchmark is for dissolved zinc and is calculated using the following equation: Benchmark = exp(0.833[ln(hardness mg·L⁻¹)] + 0.240[ln(DOC mg·L⁻¹)] + 0.526).

65. Supporting documents are available from the [Canadian Council of Ministers of the Environment](#).
66. The listed values are dry weight.
67. This is a reactive species.
68. Guideline is crop-specific: Cereals and hay value is 46 ug/L and Legumes value is 93 ug/L, per the British Columbia data catalog.
69. Active ingredient WQG is 490 ug/L per the British Columbia data catalog.
70. Guideline is crop-specific. The value listed of 0.071 ug/L applies to crops other than cereals, hay, and pastures (e.g., tomato). The value of 3.3 ug/L applies to cereals, hay, and pastures per the British Columbia data catalog.
71. The contents of the measured substances are lower than the Intervention Value for soil, not being the bed or bank of a surface water body, and for organic substances: msPAF < 20%
72. The contents of the measured substances are lower than the Intervention Value for soil, not being the bed or bank of a surface water body, and for metals: msPAF < 50%, with a maximum content for cadmium.
73. This values is a so-called 'Indicative Level'. No reliable Intervention Value could be derived. Indicative Levels are based on the same principles as Intervention Values but have a lower status.
74. This is organic mercury.
75. The three types of dihydroxybenzenes are catechol, resorcinol, and hydroquinone.
76. This chemical was given a value 50 mg/kg for falling under the monochloroanilines category.
77. This chemical was given a value of 50 mg/kg for falling under the dichloroanilines category.
78. This chemical was given a value of 10 mg/kg for falling under the trichloroanilines category.
79. This chemical was given a value of 30 mg/kg for falling under the tetrachloroanilines category.
80. This chemical was given a value of 10 mg/kg for falling under the pentachloroanilines category.
81. The listed value is valid when Aluminum's pH is greater than 6.5. If the pH is less than 6.5, then it has an unknown LOSP value of 0.0008 mg/kg.
82. The Marine Water value was blank from the source, but the Freshwater value is presented as a reference. For other chemical benchmarks from this source, the Freshwater value is often recommended as a cautionary substitute for Marine Waters.
83. The toxicant reliability of these values is unknown.
84. The toxicant reliability of these values is very low.
85. The toxicant reliability of these values is very high.
86. The toxicant reliability of these values is high.
87. The toxicant reliability of these values is low.
88. The toxicant reliability of these values is moderate.
89. Recommended for application for slightly to moderately disturbed ecosystems. If the LOSP 99 is recommended, it is due to the bioaccumulating nature of the toxicant. This application protects key species from acute and chronic toxicity.
90. Recommended for application for slightly to moderately disturbed ecosystems (to protect key species from chronic toxicity). However, this DGV may still not protect key test species from chronic toxicity (this refers to experimental chronic values or geometric mean for species).
91. DGV may be below routine limits of reporting for most commercial laboratories, although some laboratories may be able to achieve lower limits of reporting.
92. DGV may not protect key test species from acute (and chronic) toxicity.
93. Recommended for application for slightly to moderately disturbed ecosystems. Although bioaccumulation may be an issue, rapid depuration of this chemical represents a mitigating factor, and the 95% species protection DGV should provide sufficient protection for slightly-moderately disturbed systems. If local data suggest that bioaccumulation is an issue at the specific site, the 99% protection level may be more appropriate.
94. DGV may not protect key test species from chronic toxicity (this refers to experimental chronic values or geometric mean for species).
95. This value was derived from an acute toxicity dataset comprising 23 species from three taxonomic groups (but which did not include plants). As diuron is a herbicide, the value should be treated with additional caution.

96. This DGV is derived from mesocosm NOEC data. This is the only DGV available for this toxicant.
97. Bioaccumulation and secondary poisoning effects should be considered for this toxicant. To account for the bioaccumulating nature of this toxicant, it is recommended to apply the species protection level DGV that is one level above that which would normally be applied (e.g., if 95% level of species protection would normally be applied, then the 99% DGV should be used).
98. Bioaccumulation and secondary poisoning effects should be considered for this toxicant. Tainting or flavour impairment of fish flesh might occur at concentrations below the DGV. To account for the bioaccumulating nature of this toxicant, it is recommended to apply the species protection level DGV one level above that which would normally be applied (e.g., if 95% level of species protection would normally be applied, then the 99% DGV should be used). Tainting or flavour impairment of fish flesh might occur at concentrations below the DGV.
99. Bioaccumulation and secondary poisoning effects should be considered for this toxicant. Tainting or flavour impairment of fish flesh might occur at concentrations below the DGV.
100. Bioaccumulation and secondary poisoning effects should be considered for this toxicant. Tainting or flavour impairment of fish flesh might occur at concentrations below the DGV. These DGVs and the information in the corresponding technical brief for this toxicant should be used in accordance with the detailed guidance provided on the Australian and New Zealand Guidelines for Fresh and Marine Water Quality website.
101. Bioaccumulation and secondary poisoning effects should be considered for this toxicant.
102. Ammonia as total ammonia nitrogen, measured as $[\text{NH}_3\text{--N}]$ at pH 8.
103. The DGVs apply to dissolved boron and are based on data from toxicity tests conducted for a pH range of 6.8–10 and hardness range of 9.3–250 mg CaCO_3/L . They supersede the ANZECC/ARMCANZ (2000) trigger values for boron in freshwater.
104. Adjust DGVs for site-specific hardness using the hardness-dependent algorithm in Warne et al. (2018).
105. Chlorine as total chlorine, measured as $[\text{Cl}]$.
106. The copper DGVs should not be adjusted for water hardness (see Warne et al. 2018).
107. Cyanide as un-ionized HCN, measured as $[\text{CN}]$.
108. The DGVs are expressed in terms of the active ingredient (glyphosate) and do not relate to any of the breakdown products of glyphosate. They supersede the ANZECC/ARMCANZ (2000) trigger values for glyphosate in freshwater. Commercial formulations containing glyphosate can be more toxic than glyphosate alone. The Guidelines provide guidance on how to account for formulations (Also see Warne et al. 2018).
109. Sulfide as un-ionized H_2S , measured as $[\text{S}]$.
110. The DGVs relate to metolachlor only and not any of its breakdown products.
111. The DGVs are expressed in terms of the active ingredient (metsulfuron-methyl) and do not relate to any of the breakdown products of metsulfuron-methyl. They supersede the ANZECC/ARMCANZ (2000) trigger values for metsulfuron in freshwater. These DGVs and the information in the corresponding DGVs technical brief for this toxicant should be used in accordance with the detailed guidance provided on the Australian and New Zealand Guidelines for Fresh and Marine Water Quality website, including guidance on what to do if DGVs are below analytical detection limits.
112. The value listed as the saltwater CMC represents a benchmark value, not a criterion. Data limitations precluded the development of a CCC in saltwater.
113. The listed value of 0.752 mg/L is at a pH level of 6.5 with a temperature of 20°C. For information on other temperatures and pH levels, refer to Table 3 [here](#).
114. The listed value of 0.000038 mg/L is a lower-bound short-term maximum for varying water hardness and an upperbound maximum of 2.80 $\mu\text{g}/\text{L}$.
115. This value is a result of a pH level of 6.7 and 10°C. For information on other temperatures and pH levels, refer to Table 3 [here](#).
116. The listed value of 0.4 mg/L is a maximum, where the water hardness is 10 mg/L; otherwise, use the equation: $\text{LC50 fluoride} = -51.73 + 92.57 \log_{10}(\text{Hardness})$ and multiply by 0.01.
117. Dissolved Pb WQG = $\exp(0.514 [\ln(\text{DOC})] + 0.214 [\ln(\text{hardness})] + 0.4354)$
118. The listed value of 0.06 mg/L is for a chloride concentration of less than 2; 0.12 mg/L with a chloride concentration of 2–4; 0.18 mg/L with a chloride concentration of 4–6; 0.24 mg/L of a chloride concentration

- of 6–8; 0.3 mg/L with a chloride concentration of 8–10; and 0.6 mg/L with a chloride concentration greater than 10.
119. Instantaneous maximum calculated from: less than or equal to $0.01102 \text{ hardness} + 0.54$.
 120. The listed value of 0.003 mg/L is for use under non-phototoxic conditions. For use under phototoxic conditions, the value 0.00005 mg/L should be used.
 121. $WQG = [e^{[0.645 \cdot \ln(DOC)] + [2.255 \cdot \ln(hardness)] + [1.995 \cdot pH] + [-0.284 \cdot (\ln(hardness) \cdot pH)] - 9.898}] / 3$ (e.g., for a water with the following chemistry (pH = 7.5, DOC = 0.5 mg/L, hardness = 50 mg/L) the AWQG is 55 µg Al/L (total Al)).
 122. The listed value of 1.22 mg/L is at a pH level of 6.5 with a temperature of 20°C. For information on other temperatures and pH levels, refer to Table 27C [here](#).
 123. The listed value of 0.004 mg/L is for use under non-phototoxic conditions. For use under phototoxic conditions, the value 0.0001 mg/L should be used.
 124. The listed value of 0.0001 mg/L should be used under both non-phototoxic and phototoxic conditions.
 125. The listed value of 0.0000176 mg/L is a lower-bound long-term average for varying water hardness and an upperbound average of 0.457 µg/L.
 126. Average of five weekly measurements taken over a 30-day period. Calculated from: less than or equal to $0.0044 \text{ hardness} + 0.605$.
 127. When MeHg = 0.5% of THg, the listed value of 0.00002 mg/L should be used. When MeHg = 1.0% of THg, the value of 0.01 µg/L should be used. When MeHg 8.0% of THg, the value of 0.00125 µg/L should be used.
 128. The listed value of 0.02 mg/L is for a chloride concentration of less than 2; 0.04 mg/L for a chloride concentration of 2–4; 0.06 mg/L for a chloride concentration of 4–6; 0.08 mg/L for a chloride concentration of 6–8; 0.10 mg/L for a chloride concentration of 8–10; and 0.20 mg/L for a chloride concentration of more than 10.
 129. Guideline is for lakes where salmonids are the predominant fish species. Total phosphorus in lakes is either the spring overturn concentration, if the residence time of the epilimnetic water exceeds 6 months, or the mean epilimnetic growing season concentration, if residence time of epilimnetic water is below 6 months.
 130. The listed value of 0.00002 mg/L is for use under phototoxic conditions.
 131. The listed value of 0.00005 mg/L is for use when hardness is less than or equal to 100 mg/L. If hardness is greater than 100 mg/L, then use the value of 1.5 µg/L.
 132. Sulfate is dependent on water hardness (mg/L). The listed value of 128 is for a water hardness of very soft (0–30). 218 is for soft to moderately soft water hardness (31–75). 309 is for moderately soft/hard to hard water hardness (76–180). 429 is for very hard water hardness (181–250). For anything greater than 250, it needs to be determined based on site water.
 133. The long-term chronic WQC = $[\exp(0.947[\ln(hardness)] - 0.815[pH] + 0.398[\ln(DOC)] + 4.625)] / 2$. The short-term acute WQC = $[\exp(0.833[\ln(hardness)] + 0.240[\ln(DOC)] + 0.526)] / 2$.
 134. Sediment containing 1% organic carbon.
 135. The listed value of 11 mg/kg applies to fish egg/ovary. A value of 4 mg/kg applies to fish muscle/muscle plug, fish, whole-body, and invertebrate tissue (dietary). This is Aquatic Life– Freshwater Long-term Chronic.
 136. Duration < 2 hours within 24 hour period.
 137. Human activities should not cause the chloride of marine and estuarine waters to fluctuate by more than 10% of the natural chloride expected at that time and depth.
 138. Applies to all soil types.
 139. The listed value of 0.2 mg/L is for all soil types except neutral and alkaline. 400 µg/L should be used for neutral and alkaline fine textured soils.
 140. The listed value is only for forage crops.
 141. The listed value of 2 mg/L is for moderately sensitive crops (red pepper, pea, carrot, radish, potato, cucumber). 4 mg/L is for moderately tolerant crops (lettuce, cabbage, celery, turnip, Kentucky bluegrass, oat, corn, artichoke, tobacco, mustard, clover, squash, muskmelon). 1 mg/L is for sensitive crops (peach, cherry, plum, grape, cowpea, onion, garlic, sweet potato, wheat, barley, sunflower, mung bean, sesame, lupin, strawberry, Jerusalem artichoke, kidney bean, lima bean). 6 mg/L is for tolerant crops (sorghum, tomato, alfalfa, purple vetch, parsley, red beet, sugar beet). 0.5 mg/L is for very sensitive crops (black- berry). 15 mg/L is for very tolerant crops (asparagus).

142. This value is for non–forage crops. A value of 0.01 mg/L is for forage crops grown in poorly drained soils, and a value of 0.02 mg/L is for forage crops grown in well drained soil.
143. The guideline for Zinc is dependent upon the pH of the soil, not the irrigation water. For Soil pH<6, the WQC is 1 mg/L. For soil pH greater than or equal to 6 and < 7, the WQC is 2. For soil pH greater then or equal to 7, the WQC is 5.
144. The listed value of 4 mg/L is for all livestock except long lived animals, such as dairy cows and breeding stock fed normal diets. A value of 2 mg/L is for all livestock fed high fluoride diets including mineral or bone meal and feed additives. A value of 1.5 mg/L is for dairy cows, breeding stock, and long–lived animals.
145. For livestock consuming forages not irrigated or if no molybdenum containing fertilizers are applied to grow the feed consumed by livestock, a value of 0.08 mg/L should be used.
146. When nitrate and nitrite are present, total nitrate plus nitrite–nitrogen should not exceed the nitrate WQG.
147. The listed value of 1 mg/L is for dairy cows, breeding stock, and long–lived animals and all animals fed high fluoride diets including mineral or bone meal and feed additives. 2 mg/L is for all livestock except for long lived animals, such as dairy cows and breeding stock fed normal diets.
148. Guideline applies to fish or shellfish consumed by wildlife.
149. The listed value of 6 mg/kg applies to bird eggs.
150. Resin acids are pH dependent. The listed value of 0.009 mg/L is valid between pH > 6.0 and <= 6.5. A value of 1 ug/L is valid at a pH of 5.0. A value of 3 ug/L is valid between a pH > 5.0 and <= 5.5. A value of 4 ug/L is valid between a pH > 5.5 and <=6.0. A value of 25 ug/L is valid between a pH > 6.5 and <= 7.0. A value of 45 ug/L is valid between a pH > 7.0 and <= 7.5. A value of 52 ug/L is valid between a pH > 7.5 and <= 8.0. A value of 60 ug/L is valid between a pH > 8.0 and <= 8.5. A value of 62 ug/L is valid between a pH > 8.5 and <= 9.0. Any pH less an 5.0 a site assessment may be necessary.
151. Dehydroabietic acid (DHA) is pH dependent. The listed value of 0.004 mg/L is valid between pH > 6.0 and <= 6.5. A value of 1 ug/L is valid at a pH of 5.0. A value of 2 ug/L is valid between a pH > 5.0 and <= 5.5. A value of 2 ug/L is valid between a pH > 5.5 and <=6.0. A value of 8 ug/L is valid between a pH > 6.5 and <= 7.0. A value of 12 ug/L is valid between a pH > 7.0 and <= 7.5. A value of 13 ug/L is valid between a pH > 7.5 and <= 8.0. A value of 14 ug/L is valid between a pH > 8.0 and <= 8.5. A value of 14 ug/L is valid between a pH > 8.5 and <= 9.0. Any pH less an 5.0 a site assessment may be necessary.
152. The benchmark can be greater than or equal to this value.
153. The value listed of 0.0011 mg/kg is the sum of compounds Aldrin and Dieldrin.
154. The value listed of 0.0052 mg/kg is the sum of compounds Heptachlor and Heptachlor epoxide.
155. The value listed of 0.021 mg/kg is the sum of Hexachlorocyclohexanes isomers.
156. The value listed of 0.25 mg/kg is the sum of Trichlorobenzenes isomers.
157. Hardness–dependent ambient water quality criterion (100 mg/L as CaCO₃ used).
158. Value is for total of all chemical forms.
159. pH–dependent ambient water quality criterion (7.8 pH used).
160. These lowest effect levels are based on 10% of the screening level concentration instead of the default value of 5%.
161. These severe effect levels are based on 90% of the screening level concentration instead of the default value of the 95%.
162. Values are tentative guidelines.
163. Aluminum is pH dependent.
164. There is a duplicate row with higher values in the source.
165. Values are the same for Arsenic dissolved and Arsenic total recoverable.
166. Mercury dissolved value is listed. Total Recoverable value is 0.0034 mg/L.
167. The value listed is for Warm Water Habitat (WWH), Exceptional Warm Water Habitat (EWH), Modified Warm Water Habitat (MWH), Cold Water Habitat (CWH), and Limited Resource Water (LRW). For Seasonal Salmonid Habitat (SSH), no chlorine is to be discharged.
168. Mercury dissolved value is listed. Total Recoverable value is 0.0017 mg/L.
169. The value listed is for Warm Water Habitat (WWH), Exceptional Warm Water Habitat (EWH), Modified Warm Water Habitat (MWH), and Cold Water Habitat (CWH). For Seasonal Salmonid Habitat (SSH), no chlorine is to be discharged.

170. Mercury dissolved value is listed. Total Recoverable value is 0.00091 mg/L. Lake Erie Basin Total Recoverable value is 0.0000013 mg/L.
171. Selenium dissolved value is listed. Total Recoverable value is 0.005 mg/L.
172. The listed value is for Warm Water Habitat (WWH), Exceptional Warm Water Habitat (EWH), and Modified Warm Water Habitat (MWH).
173. The listed value is for Seasonal Salmonid Habitat (SSH) and Cold Water Habitat (CWH).
174. Ammonia's value is pH dependent. For Warm Water Habitat (WWH), Modified Warm Water Habitat (MWH), and Limited Resource Habitat (LRW), pH ranges between 6.5 – 7.7 with a temperature between 0C and 26C the value of 13 mg/L should be used. All other pH levels and temperatures should be referenced in Table 35–2. Link to the tables is [here](#).
175. For Exceptional Warm Water Habitats (EWH) with a pH range of 6.5 – 7.4 and a temperature between 0C and 25C, the value of 13 mg/L should be used. All other pH levels and temperatures should be referenced in Table 35–3. Link to the tables is [here](#).
176. For Cold Water Habitat (CWH) and Seasonal Salmonid Habitat (SSH) with a pH range of 6.5 – 7.4 and a temperature between 0C and 20C, the value of 13 mg/L should be used. All other pH levels and temperatures should be referenced in Table 35–4. Link to the tables is [here](#).
177. Pentachlorophenol is pH dependent. The listed value of 0.011 mg/L is for a pH level of 7.5. For other pH levels, refer to Table 35–10. Link to the tables is [here](#).
178. Cadmium is water hardness dependent. The listed value is for a water hardness of 100. For other hardness levels and forms, see Table 35–9. Link to the tables is [here](#).
179. Chromium is water hardness dependent. The listed value is for a water hardness of 100. For other hardness levels and forms, see Table 35–9 [here](#).
180. In addition, any whole sample of any representative aquatic organisms shall not exceed 0.64 mg/kg (wet weight).
181. Ammonia's value is pH dependent. For Warm Water Habitat (WWH) with pH ranges between 6.5 – 7.7 with a temperature between 10C and 14C, and during the months of March to November the value of 2.3 mg/L should be used. All other pH levels, temperatures, and months should be referenced in Table 35–5. Link to the tables is [here](#).
182. Ammonia's value is pH dependent. For Exceptional Warm Water Habitats (EWH) with pH ranges between 6.5 – 7.7, a temperature between 10C and 13C, and during the months of March to November, the value of 2.2 mg/L should be used. All other pH levels, temperatures, and months should be referenced in Table 35–6. Link to the tables is [here](#).
183. Ammonia's value is pH dependent. For Modified Warm Water Habitat (MWH) with pH ranges between 6.5 – 7.7, a temperature between 10C and 13C, and during the months of March to November, the value of 3.4 mg/L should be used. All other pH levels, temperatures, and months should be referenced in Table 35–7. Link to the tables is [here](#).
184. Ammonia's value is pH dependent. For Cold Water Habitat (CWH) with pH ranges between 6.5 – 7.7 with a temperature between 8C and 13C, a value of 2.2 mg/L should be used. All other pH levels and temperatures should be referenced in Table 35–8. Link to the tables is [here](#).
185. Copper is water hardness dependent. The listed value is for a water hardness of 100. For other hardness levels and forms, see Table 35–9 [here](#).
186. Lead is water hardness dependent. The listed value is for a water hardness of 100. For other hardness levels and forms, see Table 35–9 [here](#).
187. Nickel is water hardness dependent. The listed value is for a water hardness of 100. For other hardness levels and forms, see Table 35–9 [here](#).
188. Zinc is water hardness dependent. The listed value is for a water hardness of 100. For other hardness levels and forms, see Table 35–9 [here](#).
189. This criterion applies to the sum of DDT and metabolites.
190. The form of the chemical is dissolved.
191. The form of the chemical is total recoverable.
192. The form of the chemical is total.
193. The form of the chemical is total residual.
194. The form of the Cyanide is free.

195. Values enclosed by "()" were not calculated according to the regulations, due to limited data. These values should only be used for advisory purposes, such as establishing "reasonable potential".
196. Values enclosed by "[]" are national criteria and should be used for advisory purposes only.
197. Values are estimates.
198. Values are pH based.
199. Criterion is expressed as a function of the Water Effect Ratio (WER). For criterion in the table, WER equates to the default value of 1.0.
200. Dissolved criterion.
201. Criteria expressed as free cyanide (as CN)/L.
202. The value listed is calculated with an assumed hardness level of 100. To calculate additional hardness values, use the formulas provided in the document on page 34.
203. Westhollow Technical Center Levels were developed by Shell Oil for surface water and were approved for use by NJDEP with the following conditions: 1) the source area is removed, 2) these levels are on the fringe of the contamination area, and 3) active remediation is occurring. These levels are applicable to surface water and wetland areas.
204. The value listed is calculated with an assumed pH of 6.8 and temperature of 20C. For other values regarding various temperatures and pH levels, use the formulas provided in the document on page 33.
205. This value is for the total of Heptachlor/Heptachlor epoxide.
206. The benzene hexachloride (BHC) value applies to all stereoisomers of 1,2,3,4,5,6-hexachlorocyclohexane.
207. This value applies to all chlorinated dibenzofurans.
208. This value applies to all chlorinated dibenzo-p-dioxins.
209. Criteria for these metals are measured as total recoverable metal. However, they may be applied as dissolved metals when, as part of a permit application, a dissolved metals translator has been established according to the procedures described in the document, "Guidance for Establishing a Metal Translator", Florida Department of Environmental Protection, December 17, 2001.
210. In the absence of concentration data specific for the III and VI valence states of chromium, total chromium concentrations in surface water should be compared to the criteria for Chromium (hexavalent).
211. These values were derived assuming soil pH 6.8. These leachability values are dependent upon both the metal concentration in soil and soil characteristics. Thus, if site-specific soil characteristics are different than the defaults, these leachability values may not apply. If this is the case, site-specific leachability values should be derived using methods such as TCLP or SPLP.
212. Phytotoxicity must be considered.
213. Unless concentrations for both chromium III and VI are known, total chromium concentrations should be compared with direct exposure SCTLs for chromium VI.
214. Expressed as dissolved.
215. Expressed as total recoverable.
216. Criteria do not apply to waters subject to water quality objectives in Tables III-2A and III-2B of the San Francisco Bay Regional Water Quality Control Board's 1986 Basin Plan.
217. Criterion most appropriately applied to the sum of alpha-Endosulfan and beta-Endosulfan.
218. For nonchlorinated phenolic compounds.
219. For chlorinated phenolic compounds.
220. For benzene hexachloride isomers.
221. Value developed for chromium (VI); may be applied to total chromium if valence is unknown.
222. For the sum of alpha-Endosulfan, beta-Endosulfan, and Endosulfan sulfate.
223. Expressed as nitrogen.
224. For total chlorine residual.
225. For dissolved chloride associated with sodium; criterion probably will not be adequately protective when chloride is associated with potassium, calcium, or magnesium rather than sodium.
226. Expressed as free cyanide (as CN).
227. For pH between 6.5 and 9.0. Use of Water-Effects Ratios might be appropriate because: (1) aluminum is less toxic at higher pH and hardness but relationship not well quantified; (2) aluminum associated with clay

- particles may be less toxic than that associated with aluminum hydroxide particles; and (3) many high quality waters in U.S. exceed 87 ug/L as total or dissolved.
228. Applies to DDT and its metabolites (i.e., the total concentration of DDT and its metabolites should not exceed this value).
 229. Interim.
 230. This value is for ruminant livestock. For non-ruminants, use 0.284
 231. See the Ecological Soil Screening Level for Aluminum, Interim Final, OSWER Directive 9285.7-60 [here](#)
 232. See the Ecological Soil Screening Level for Iron, Interim Final, OSWER Directive 9285.7-69 [here](#)
 233. The chronic freshwater-based and chronic tissue-based criteria are independently applicable and no one criterion takes primacy. The value here is for water. Other values are as follows: 0.000028 mg/kg wet weight for invertebrate whole-body tissue; 0.000201 mg/kg wet weight for fish whole-body tissue; and 0.000087 mg/kg wet weight for fish muscle tissue.
 234. The chronic freshwater-based and chronic tissue-based criteria are independently applicable and no one criterion takes primacy. The value here is for water. Other values are as follows: 0.00108 mg/kg wet weight for invertebrate whole-body tissue; 0.00649 mg/kg wet weight for fish whole-body tissue; and 0.000133 mg/kg wet weight for fish muscle tissue.
 235. pH 6.5-9.0
 236. Criteria is for total dissolved form.
 237. Freshwater criteria calculated using the EPA Biotic Ligand Model.
 238. Cyanide measured as free cyanide at the lowest pH occurring in the receiving water or cyanide amenable to chlorination.
 239. The one-hour average concentration of total ammonia nitrogen (in mg TAN/L) is not to exceed, more than once every three years on the average, the CMC (acute criterion magnitude) calculated using the following equation: $CMC = \text{MIN}((0.275/(1+10^{(7.204-pH)})) + (39/(1+10^{(pH-7.204)}))), (0.7249*((0.0114/(1+10^{(7.204-pH)}) + (1.6181/(1+10^{(pH-7.204)})) * (23.12 * 10^{(0.036 * (20-t))}))),$ where pH = pH of interest, t = temperature degrees Celsius.
 240. The thirty-day rolling average concentration of total ammonia nitrogen (in mg TAN/L) is not to exceed, more than once every three years on the average, the chronic criterion magnitude (CCC) calculated using the following equation: $CCC = 0.8876 * ((0.0278/(1+10^{(7.688-pH)}) + (1.1994/(1+10^{(pH-7.688)}))) * (2.126 * 10^{(0.028 * (20 - \text{MAX}(T \text{ where pH = pH of interest, t = temperature degrees Celsius. In addition, the highest 4-day average within the 30-day averaging period should not be more than 2.5 times the CCC more than once in 3 years on average.}$
 241. Value = $\text{EXP}^{(0.9789 * \text{LN}(\text{hardness}) - 3.866) * (1.136672 - ((\text{LN}(\text{hardness}) * (0.041838))))}$, where EXP = e = 2.71828, LN = natural log base e, and hardness is expressed as mg/L as CaCO₃.
 242. Value = $\text{EXP}^{(0.7977 * \text{LN}(\text{hardness}) - 3.909) * (1.101672 - ((\text{LN}(\text{hardness}) * (0.041838))))}$, where EXP = e = 2.71828, LN = natural log base e, and hardness is expressed as mg/L as CaCO₃.
 243. Value = $0.316 * \text{EXP}(0.819 * \text{LN}(\text{hardness}) + 3.7256)$, where EXP = e = 2.71828, LN = natural log base e, and hardness is expressed as mg/L as CaCO₃.
 244. Value = $0.86 * \text{EXP}(0.819 * \text{LN}(\text{hardness}) + 0.6848)$, where EXP = e = 2.71828, LN = natural log base e, and hardness is expressed as mg/L as CaCO₃.
 245. Value = $(1.46203 - \text{LN}(\text{hardness}) * 0.145712) * \text{EXP}(1.273 * \text{LN}(\text{hardness}) - 1.460)$, where EXP = e = 2.71828, LN = natural log base e, and hardness is expressed as mg/L as CaCO₃.
 246. Value = $(1.46203 - \text{LN}(\text{hardness}) * 0.145712) * \text{EXP}(1.273 * \text{LN}(\text{hardness}) - 4.705)$, where EXP = e = 2.71828, LN = natural log base e, and hardness is expressed as mg/L as CaCO₃.
 247. Value = $0.998 * \text{EXP}(0.8460 * \text{LN}(\text{hardness}) + 2.255)$, where EXP = e = 2.71828, LN = natural log base e, and hardness is expressed as mg/L as CaCO₃.
 248. Value = $0.997 * \text{EXP}(0.8460 * \text{LN}(\text{hardness}) + 0.0584)$, where EXP = e = 2.71828, LN = natural log base e, and hardness is expressed as mg/L as CaCO₃.
 249. Value = $\text{EXP}(1.005 * \text{pH} - 4.869)$, where EXP = e = 2.71828, LN = natural log base e, and hardness is expressed as mg/L as CaCO₃.
 250. Value = $\text{EXP}(1.005 * \text{pH} - 5.134)$, where EXP = e = 2.71828, LN = natural log base e, and hardness is expressed as mg/L as CaCO₃.
 251. Value = $0.85 * \text{EXP}(1.72 * \text{LN}(\text{hardness}) - 6.59)$, where EXP = e = 2.71828, LN = natural log base e, and hardness is expressed as mg/L as CaCO₃.

