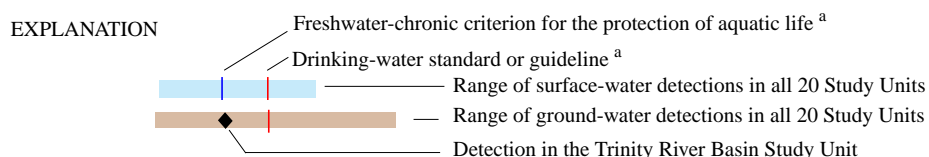


SUMMARY OF COMPOUND DETECTIONS AND CONCENTRATIONS

The following tables summarize data collected for NAWQA studies from 1992–95 by showing results for the Trinity River Basin Study Unit compared to the NAWQA national range for each compound detected. The data were collected at a wide variety of places and times. In order to represent the wide concentration ranges observed among Study Units, logarithmic scales are used to emphasize the general magnitude of concentrations (such as 10, 100, or 1,000), rather than the precise number. The complete dataset used to construct these tables is available upon request.

Concentrations of herbicides, insecticides, volatile organic compounds, and nutrients detected in ground and surface waters of the Trinity River Basin Study Unit

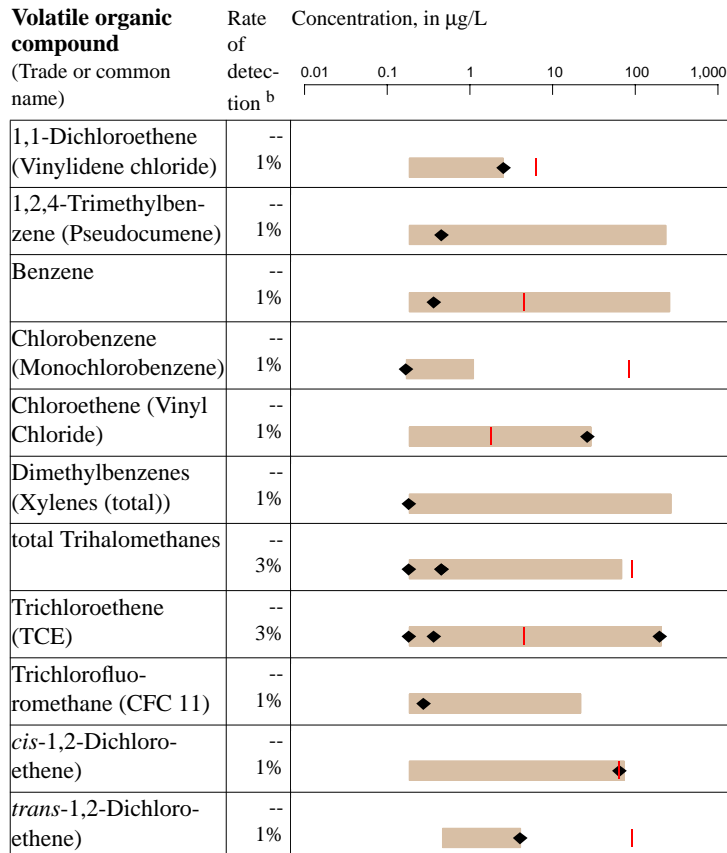
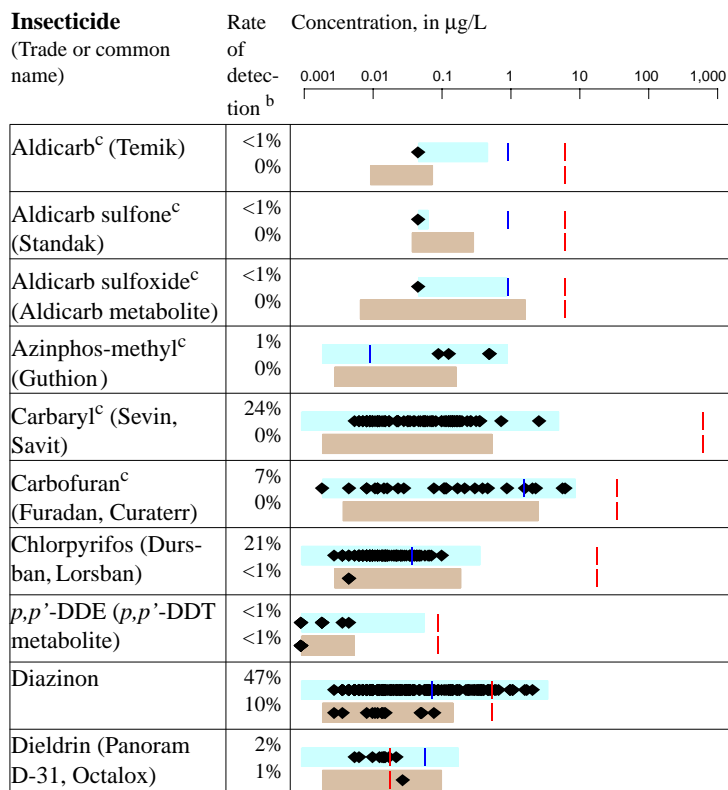
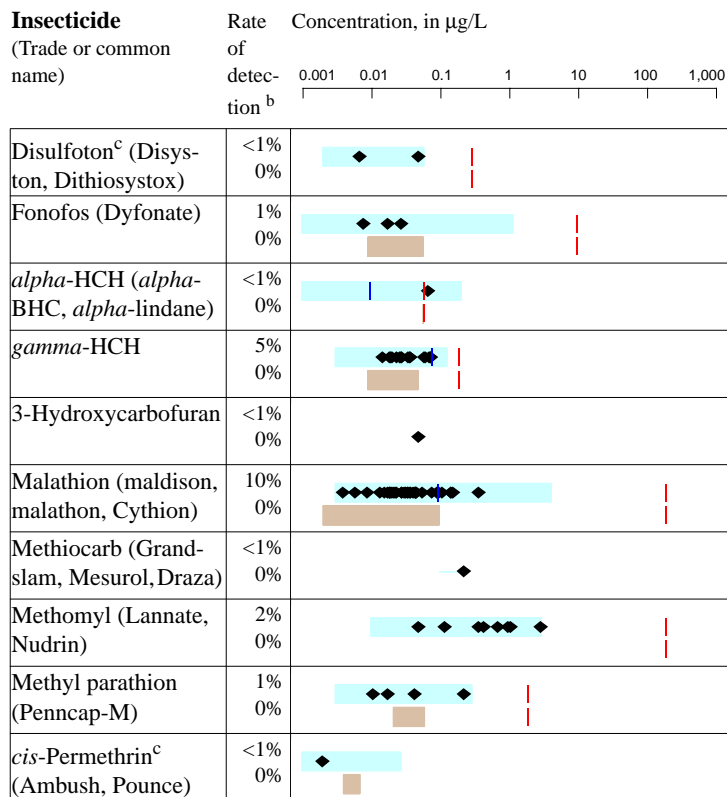
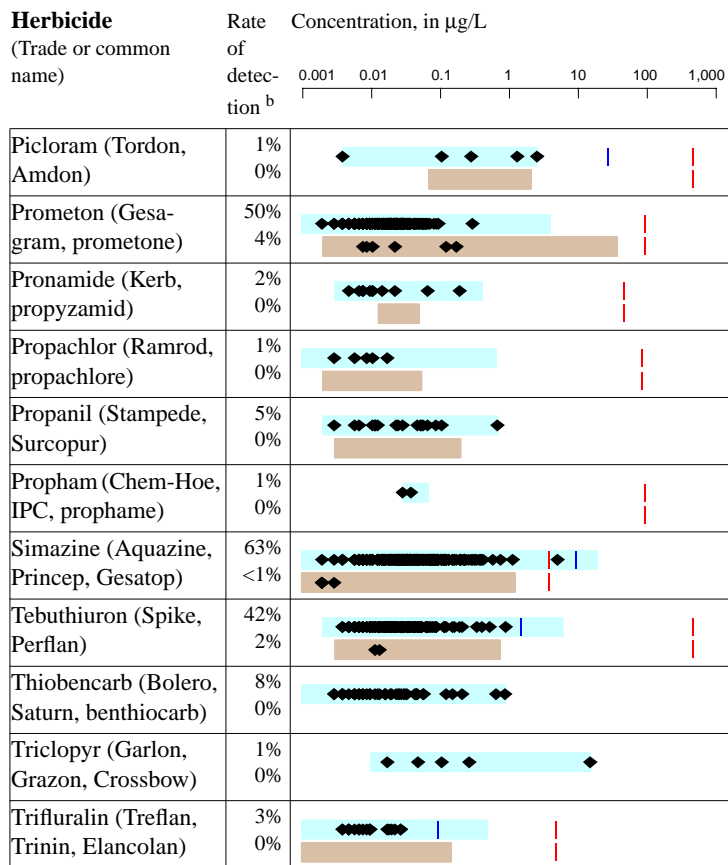
[µg/L, micrograms per liter; %, percent; <, less than; --, not measured; mg/L, milligrams per liter; trade names might vary]



Herbicide (Trade or common name)	Rate of detection ^b	Concentration, in µg/L
Acetochlor	7% 0%	
Acifluorfen (Blazer, Tackle 2S)	1% 0%	
Alachlor (Lasso)	15% 0%	
2,6-Diethylaniline (Alachlor metabolite)	<1% 0%	
Atrazine (AAtrex, Gesaprim)	88% 3%	
Deethylatrazine ^c (Atrazine metabolite)	71% 4%	
Bentazon (Basagran, bentazone)	4% 1%	
Bromacil (Hyvar X, Urox B, Bromax)	<1% 1%	
Bromoxynil (Buctril, Brominal, Torch)	<1% 0%	
Butylate (Sutan, Genate Plus, butylate)	<1% 0%	
Chloramben (Amiben, Vegiben)	<1% 0%	
Clopyralid (Stinger, Lontrel, Dowco 290)	1% 0%	
Cyanazine (Bladex, Fortrol)	5% 0%	
2,4-D (2,4-PA)	17% 2%	
DCPA (Dacthal, chlorthal-dimethyl)	<1% <1%	
Dacthal, mono-acid (Dacthal metabolite)	<1% 0%	

Herbicide (Trade or common name)	Rate of detection ^b	Concentration, in µg/L
Dicamba (Banvel, Mediben, dianat)	1% 0%	
Dichlorprop (2,4-DP, Seritox 50, Kildip)	3% 0%	
Dinoseb (DNBP, DN 289, Premerge, Aretit)	1% 0%	
Diuron (Karmex, Direx, DCMU)	7% 0%	
EPTC (Eptam)	1% 0%	
Fluometuron (Flo-Met, Cotoran)	17% 0%	
Linuron (Lorox, Linex, Sarclex)	1% 0%	
MCPA (Agritox, Agroxone)	3% 0%	
MCPB (Can-Trol, Thistrol, Tropotox)	<1% 0%	
Metolachlor (Dual, Pennant)	69% 0%	
Metribuzin (Lexone, Sencor)	10% 2%	
Molinate (Ordram)	18% 0%	
Napropamide (Devrinol)	<1% 0%	
Neburon (Neburex, Noruben, Kloben)	<1% 0%	
Oryzalin (Surflan, Dirimal, Ryzelan)	3% 0%	
Pendimethalin (Prowl, Stomp)	10% 0%	

SUMMARY OF COMPOUND DETECTIONS AND CONCENTRATIONS



SUMMARY OF COMPOUND DETECTIONS AND CONCENTRATIONS

Volatile organic compound (Trade or common name)	Rate of detection ^b	Concentration, in µg/L							Nutrient	Rate of detection ^b	Concentration, in mg/L						
		0.01	0.1	1	10	100	1,000	10,000			100,000	0.01	0.1	1	10	100	1,000
Methyl <i>tert</i> -butyl ether ^d (MTBE)	-- 4%								Dissolved ammonia	90% 92%							
Tetrachloroethene (Perchloroethene)	-- 1%								Dissolved ammonia plus organic nitrogen as nitrogen	91% 41%							
									Dissolved phosphorus as phosphorus	77% 66%							
									Dissolved nitrite plus nitrate	87% 50%							

Herbicides, insecticides, volatile organic compounds, and nutrients not detected in ground and surface waters of the Trinity River Basin Study Unit.

Herbicides

2,4,5-T
2,4,5-TP (Silvex, Fenoprop)
2,4-DB (Butyrac, Butoxone, Embutox Plus, Embutone)

Benfluralin (Balan, Benefin, Bonalan, Benefex)
Ethalfuralin (Sonalan, Curbit)

Fenuron (Fenulon, Fenidim)
Norflurazon (E vital, Predict, Solicam, Zorial)
Pebulate (Tillam, PEBC)
Terbacil (Sinbar)
Triallate (Far-Go, Avadex BW, Tri-allate)

Insecticides

Ethoprop (Mocap, Ethoprophos)
Oxamyl (Vydate L, Pratt)
Parathion (Roethyl-P, Alkaron, Panthion, Phoskil)
Phorate (Thimet, Granutox, Geomet, Rampart)

Propargite (Comite, Omite, Ornamite)

Propoxur (Baygon, Blat-tanex, Uden, Proprotax)
Terbufos (Contraven, Counter, Pilarfox)

Volatile organic compounds

1,1,1,2-Tetrachloroethane (1,1,1,2-TeCA)
1,1,1-Trichloroethane (Methylchloroform)
1,1,2,2-Tetrachloroethane
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113, CFC 113)
1,1,2-Trichloroethane (Vinyl trichloride)
1,1-Dichloroethane (Ethylidene dichloride)
1,1-Dichloropropene
1,2,3-Trichlorobenzene (1,2,3-TCB)
1,2,3-Trichloropropane (Allyl trichloride)
1,2,4-Trichlorobenzene
1,2-Dibromo-3-chloropropane (DBCP, Nemagon)

1,2-Dibromoethane (EDB, Ethylene dibromide)

1,2-Dichlorobenzene (*o*-Dichlorobenzene, 1,2-DCB)
1,2-Dichloroethane (Ethylene dichloride)
1,2-Dichloropropane (Propylene dichloride)
1,3,5-Trimethylbenzene (Mesitylene)
1,3-Dichlorobenzene (*m*-Dichlorobenzene)
1,3-Dichloropropane (Trimethylene dichloride)
1,4-Dichlorobenzene (*p*-Dichlorobenzene, 1,4-DCB)
1-Chloro-2-methylbenzene (*o*-Chlorotoluene)
1-Chloro-4-methylbenzene (*p*-Chlorotoluene)
2,2-Dichloropropane
Bromobenzene (Phenyl bromide)
Bromochloromethane (Methylene chlorobromide)
Bromomethane (Methyl bromide)

Chloroethane (Ethyl chloride)
Chloromethane (Methyl chloride)
Dibromomethane (Methylene dibromide)
Dichlorodifluoromethane (Freon 12, CFC 12)
Dichloromethane (Methylene chloride)
Ethenylbenzene (Styrene)
Ethylbenzene (Phenylethane)
Hexachlorobutadiene
Isopropylbenzene (Cumene)
Methylbenzene (Toluene)
Naphthalene
Tetrachloromethane (Carbon tetrachloride)
cis-1,3-Dichloropropene (*(Z)*-1,3-Dichloropropene)
n-Butylbenzene (1-Phenylbutane)
n-Propylbenzene (Isocumene)
p-Isopropyltoluene (*p*-Cymene)
sec-Butylbenzene

tert-Butylbenzene
trans-1,3-Dichloropropene (*(E)*-1,3-Dichloropropene)

Nutrients

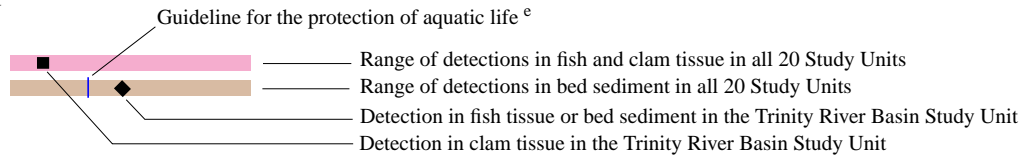
No nondetects

SUMMARY OF COMPOUND DETECTIONS AND CONCENTRATIONS

Concentrations of semivolatile organic compounds, organochlorine compounds, and trace elements detected in fish and clam tissue and bed sediment of the Trinity River Basin Study Unit

[µg/kg, micrograms per kilogram; --, not measured; %, percent; µg/g, micrograms per gram; trade names may vary]

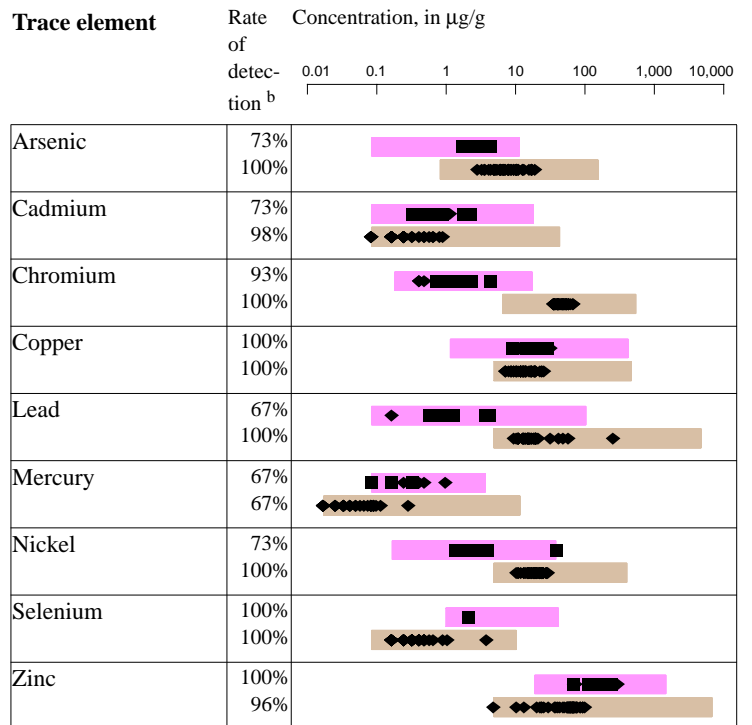
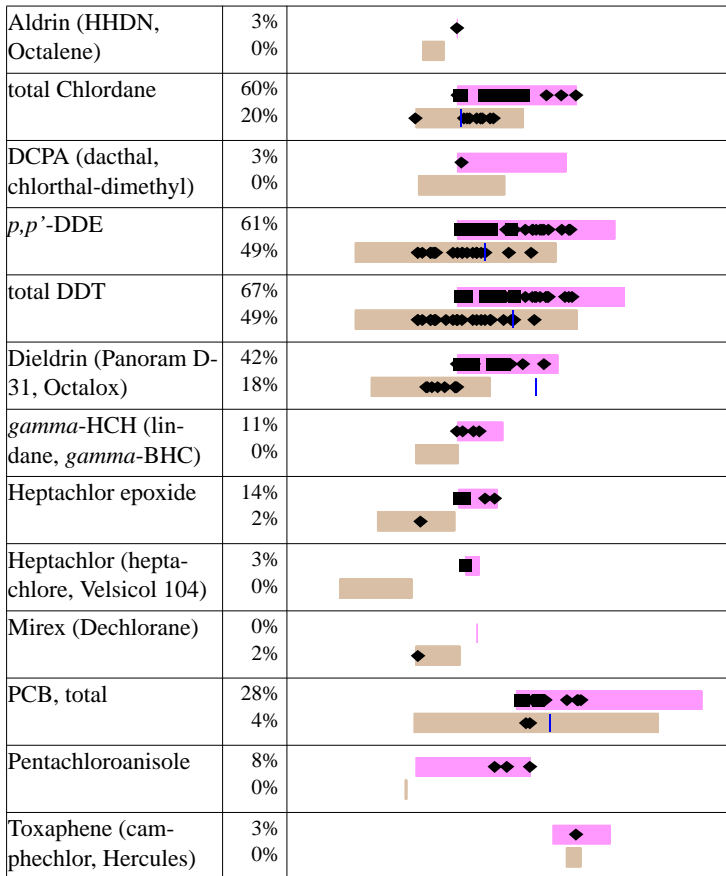
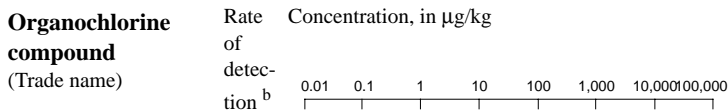
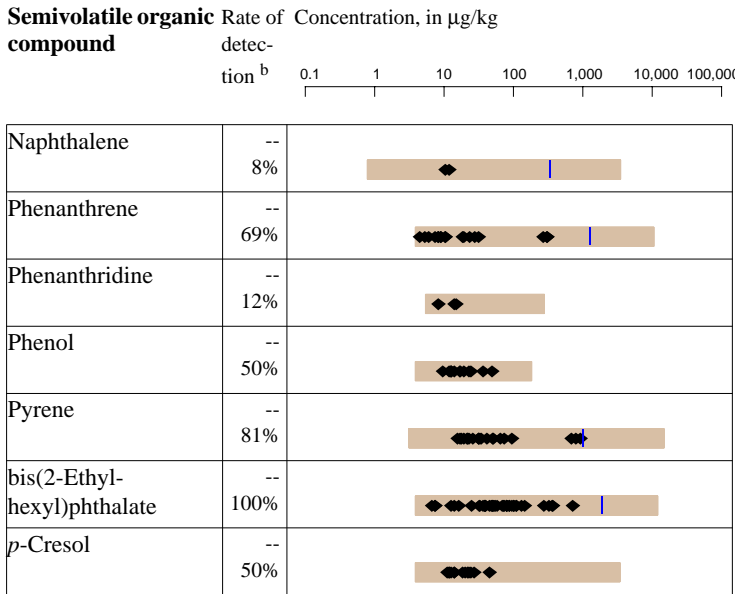
EXPLANATION



Semivolatile organic compound	Rate of detection ^b	Concentration, in µg/kg
		0.1 1 10 100 1,000 10,000 100,000
1,2-Dimethylnaphthalene	-- 4%	
1,6-Dimethylnaphthalene	-- 15%	
1-Methylphenanthrene	-- 27%	
1-Methylpyrene	-- 35%	
2,2-Biquinoline	-- 4%	
2,3,6-Trimethylnaphthalene	-- 4%	
2,6-Dimethylnaphthalene	-- 58%	
2,6-Dinitrotoluene	-- 2%	
2-Ethyl-naphthalene	-- 8%	
2-Methylantracene	-- 35%	
4,5-Methylene-phenanthrene	-- 35%	
9H-Carbazole	-- 46%	
9H-Fluorene	-- 39%	
Acenaphthene	-- 15%	
Acenaphthylene	-- 22%	
Acridine	-- 35%	
Anthracene	-- 46%	

Semivolatile organic compound	Rate of detection ^b	Concentration, in µg/kg
		0.1 1 10 100 1,000 10,000 100,000
Anthraquinone	-- 50%	
Benz(a)anthracene	-- 51%	
Benzo(a)pyrene	-- 49%	
Benzo(b)fluoranthene	-- 51%	
Benzo(g,h,i)perylene	-- 37%	
Benzo(k)fluoranthene	-- 51%	
Butylbenzylphthalate	-- 88%	
Chrysene	-- 51%	
Di-n-butylphthalate	-- 95%	
Di-n-octylphthalate	-- 15%	
Dibenz(a,h)anthracene	-- 27%	
Dibenzothiophene	-- 12%	
Diethylphthalate	-- 61%	
Dimethylphthalate	-- 32%	
Fluoranthene	-- 85%	
Indeno(1,2,3-cd)pyrene	-- 46%	
Isoquinoline	-- 19%	

SUMMARY OF COMPOUND DETECTIONS AND CONCENTRATIONS



Semivolatile organic compounds, organochlorine compounds, and trace elements not detected in fish and clam tissue and bed sediment of the Trinity River Basin Study Unit.

Semivolatile organic compounds	4-Chloro-3-methylphenol	Organochlorine compounds	<i>beta</i> -HCH (<i>beta</i> -BHC, <i>beta</i> -hexachlorocyclohexane, <i>alpha</i> -benzene hexachloride)	<i>trans</i> -Permethrin (Ambush, Astro, Pounce, Pramex, Pertox, Ambushfog, Kafil, Perthrine, Picket, Picket G, Dragnet, Talcord, Outflank, Stockade, Eksmin, Coopex, Peregin, Stomoxin, Stomoxin P, Qamlin, Corsair, Tornado)
1,2,4-Trichlorobenzene	4-Chlorophenyl-phenyl-ether	Chloroneb (chloronebe, Demosan, Soil Fungicide 1823)	<i>cis</i> -Permethrin (Ambush, Astro, Pounce, Pramex, Pertox, Ambushfog, Kafil, Perthrine, Picket, Picket G, Dragnet, Talcord, Outflank, Stockade, Eksmin, Coopex, Peregin, Stomoxin, Stomoxin P, Qamlin, Corsair, Tornado)	Trace elements
1,2-Dichlorobenzene (<i>o</i> -Dichlorobenzene, 1,2-DCB)	Azobenzene	Endosulfan I (<i>alpha</i> -Endosulfan, Thiodan, Cyclodan, Beosit, Malix, Thimul, Thifor)	<i>delta</i> -HCH (<i>delta</i> -BHC, <i>delta</i> -hexachlorocyclohexane, <i>delta</i> -benzene hexachloride)	No nondetects
1,3-Dichlorobenzene (<i>m</i> -Dichlorobenzene)	Benzo(<i>c</i>)cinnoline	Endrin (Endrine)	<i>o,p'</i> -Methoxychlor	
1,4-Dichlorobenzene (<i>p</i> -Dichlorobenzene, 1,4-DCB)	C8-Alkylphenol	Hexachlorobenzene (HCB)	<i>p,p'</i> -Methoxychlor (Marlate, methoxychlore)	
1-Methyl-9H-fluorene	Isophorone	Isodrin (Isodrine, Compound 711)		
2,4-Dinitrotoluene	<i>N</i> -Nitrosodi- <i>n</i> -propylamine	<i>alpha</i> -HCH (<i>alpha</i> -BHC, <i>alpha</i> -lindane, <i>alpha</i> -hexachlorocyclohexane, <i>alpha</i> -benzene hexachloride)		
2-Chloronaphthalene	<i>N</i> -Nitrosodiphenylamine			
2-Chlorophenol	Nitrobenzene			
3,5-Dimethylphenol	Pentachloronitrobenzene			
4-Bromophenyl-phenyl-ether	Quinoline			
	bis(2-Chloroethoxy)methane			

^a Selected water-quality standards and guidelines (Gilliom and others, in press).

^b Rates of detection are based on the number of analyses and detections in the Study Unit, not on national data. Rates of detection for herbicides and insecticides were computed by counting only detections equal to or greater than 0.01 µg/L to facilitate equal comparisons among compounds, which had widely varying detection limits. For herbicides and insecticides, a detection rate of “<1%” means that all detections are less than 0.01 µg/L, or the detection rate rounds to less than 1%. For other compound groups, all detections were counted and minimum detection limits for most compounds were similar to the lower end of the national ranges shown. Method detection limits for all compounds in these tables are summarized in (Gilliom and others, in press).

^c Detections of these compounds are reliable, but concentrations are determined with greater uncertainty than for the other compounds and are reported as estimated values (Zaugg and others, 1995).

^d The guideline for methyl *tert*-butyl ether is between 20 and 40 µg/L; if the tentative cancer classification C is accepted, the lifetime health advisory will be 20 µg/L (Gilliom and others, in press).

^e Selected sediment-quality guidelines (Gilliom and others, in press).