Analytical Data from Phases I and II of the Willamette River Basin Water Quality Study, Oregon, 1992–94

U.S. GEOLOGICAL SURVEY
Open-File Report 95–373

Prepared in cooperation with the
OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
WILLAMETTE RIVER TECHNICAL ADVISORY STEERING COMMITTEE, and the
NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

Cover photograph. Looking upstream at the Willamette River with Mt. Hood and Portland Harbor in the background, February 7, 1993. *(Photograph by Dennis A. Wentz, U.S. Geological Survey.)*

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For additional information write to:

District Chief
U.S. Geological Survey, WRD
10615 S.E. Cherry Blossom Drive
Portland, OR 97216
E-mail: info-or@usgs.gov
Internet: <http://oregon.usgs.gov>

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U.S. Geological Survey
Branch of Information Services
Box 25286, Federal Center
Denver, CO 80225

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CONVERSION FACTORS

Multiply	By	To obtain
A. Factors for converting International System (SI) metric units to inch/pound units		
	Length	
centimeter (cm)	0.3937	inch (in)
millimeter (mm)	0.03937	inch
meter (m)	3.281	foot (ft)
meter	1.094	yard (yd)
	Volume	
milliliter (mL)	0.001057	quart (qt)
liter (L)	1.057	quart
liter	0.2642	gallon (gal)
	Mass	
gram (g)	0.03527	ounce avoirdupois (oz avdp)
kilogram (kg)	2.205	pound avoirdupois (lb avdp)
	Temperature	
degrees Celsius (^{o}C)	^{o}F = 1.8 (^{o}C) + 32	degrees Fahrenheit (^{o}F)
B. Factors for converting inch/pound units to SI metric units		
	Flow (Volume Per Unit Time)	
cubic foot per second (ft^3/s)	0.02832	cubic meter per second (m^3/s)
C. Factors for converting SI metric units to other miscellaneous units		
	Concentration in Water	
milligrams per liter (mg/L)	1	parts per million (ppm)
micrograms per liter (µg/L)	1	parts per billion (ppb)
picograms per kiloliter (pg/kL)	0.001	parts per quadrillion (ppq)
	Concentration in Bed Sediment	
percent (%)	1	parts per hundred
grams per kilogram (g/kg)	1	parts per thousand
micrograms per gram (µg/g)	1	parts per million
micrograms per kilogram (µg/kg)	1	parts per billion
picograms per gram (pg/g)	1	parts per trillion

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By Howard E. Harrison, Chauncey W. Anderson, Frank A. Rinella, Timothy M. Gasser and Ted R. Pogue, Jr.

Abstract

This report presents trace-element, organic-compound (pesticides, volatile and semi-volatile organic, and dioxin and furan compounds), and nutrient concentration data from the analyses of water column, suspended-sediment, and bed-sediment samples collected by the U.S. Geological Survey as part of Phases I and II of the comprehensive Willamette River Basin Water Quality Study in western Oregon. The overall study was designed by the Oregon Department of Environmental Quality to acquire the technical and regulatory knowledge necessary to protect and enhance water quality in the Willamette River Basin.

These data were collected at 50 sites representing runoff from agricultural, forested, and urbanized subbasins. In Phase I, water samples were collected during high and low flows in 1992 and 1993 to represent a wide range of hydrologic conditions. Bed-sediment samples were collected during low flows in 1993. In Phase II, water samples were collected in the spring of 1994 after the first high-flow event following the application of agricultural fertilizers and pesticides and in the fall during the first high-flow events following the conclusion of the agricultural season.

INTRODUCTION

In 1990, the Oregon Department of Environmental Quality (ODEQ) identified the protection and enhancement of water quality in the Willamette River Basin (fig. 1) as one of its critical long-range resource-management goals. In response to a joint State Legislative Emergency Board mandate, ODEQ formed the Willamette River Technical Advisory Steering Committee (WRTASC) and charged the committee to design a comprehensive study to develop the technical and regulatory knowledge required to protect and enhance water quality in the basin. The committee is composed of representatives of Federal, State, and local agencies, as well as from industry, environmental groups, and the public. In 1992, WRTASC designed the Willamette River Basin Water Quality Study to collect critical information necessary to direct future management efforts. As part of this study the U.S. Geological Survey (USGS) investigated (1) hydrology, (2) sediment transport, and (3) major sources of pesticides and trace elements within the basin.

Purpose and Scope

This report presents trace-element, organic-compound (pesticides, volatile and semi-volatile organic, and dioxin and furan compounds), and nutrient concentration data from the analyses of water column, suspended-sediment, and bed-sediment samples collected from the Willamette River Basin (objective 3 listed above). These data were collected in two phases. Phase I was a reconnaissance of hydrophilic- and hydrophobic-contaminant concentrations in water and bed sediment spanning an 18 month period (April 1992 through September 1993). Phase II consisted of spring (March through June 1994) and fall (October through December 1994) high-flow samplings to identify and (or) quantify major sources of pesticides and trace-elements.

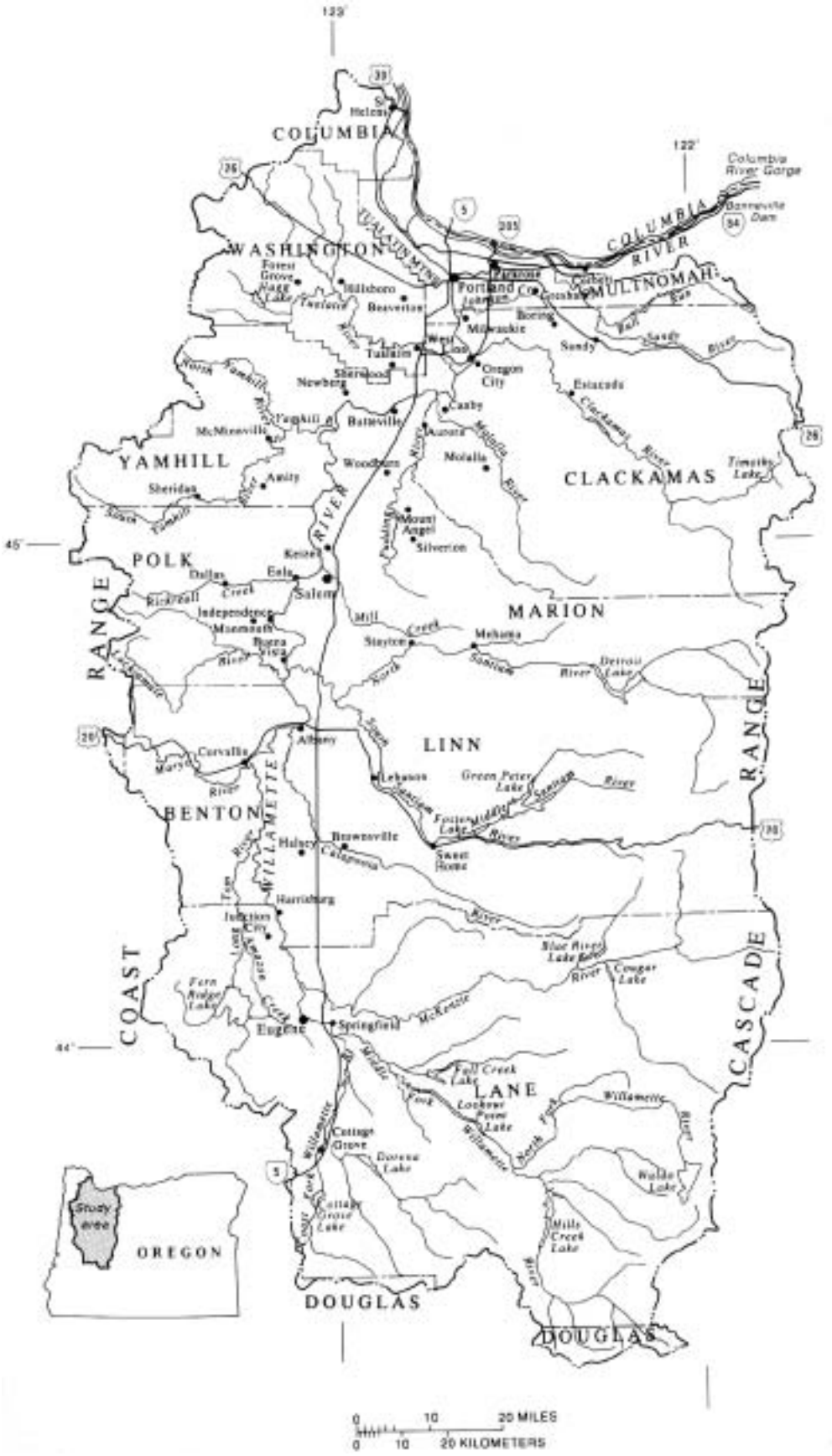

Figure 1. The Willamette and Sandy River Basins, Oregon.

Acknowledgments

The authors wish to thank the USGS Willamette Basin National Water-Quality Assessment (NAWQA) Program for its contribution of personnel and equipment to the data-collection effort. In addition, we are grateful to the members of the WRTASC for their guidance and support in this project.

STUDY AREA

The Willamette River Basin, including the Sandy River Basin, encompasses nearly 12,000 square miles (fig. 1). The Willamette River is located in western Oregon between the Coast and Cascade Ranges and is the 13th largest river basin in the conterminous United States (Kammerer, 1990). Fed by 13 major tributaries, the Willamette River flows north over 270 miles from its headwaters to its confluence with the Columbia River near Portland, Oregon. The basin is home to more than 1.8 million people (69 percent of the State's population). Land use in the basin is varied (table 1); forested lands are predominant on the slopes of the Cascade and Coast Ranges, and agricultural lands are predominant in the lower elevations. Although urban regions account for only a small percentage of the land area, they are concentrated along the main stem of the Willamette River in the metropolitan areas of Portland, Salem, and Eugene-Springfield.

Table 1. Land use in the Willamette and Sandy River Basins, Oregon
[Source: adapted from Fegeas and others, 1983]

Category	Area (Square miles)	Percent of basin area
Urban	631.7	5.27
Agriculture	2691.1	22.46
Rangeland	53.1	0.44
Forest	8411.1	70.18
Open water	112.6	0.94
Wetland	41.4	0.35
Barren land	20.8	0.17
Tundra	16.8	0.14
Glacial	6.1	0.05
Total	11,984.7	100.00

SITE SELECTION AND SAMPLING PLAN

Available data on point- and nonpoint-source discharges, pesticide usage, and land-use practices were used in conjunction with current and historical water-quality records to select sampling sites. These sites were categorized according to the dominant land use within the basin as either forest, agriculture, urban-industrial or, when no other category exceeded 50 percent of the upstream drainage, as integrator. Some exceptions in this classification scheme occurred at sites where local land use dominated the water quality. Forested sites were sampled to verify the assumption that nonpoint runoff from these lands was only a minor source of trace-elements or pesticides.

Water-quality sampling locations are described in table 2 and shown in figure 2. These 50 sites were distributed throughout the basin on the main stem of the Willamette River, as well as on major and minor tributaries. Twenty-one sites were visited in Phase I and 33 sites in Phase II; four sites were visited in both phases. Tables 3, 4, and 5 provide the sampling plans for Phase I, Phase II (spring), and Phase II (fall), respectively.

In Phase I, water samples were collected during high and low flows in 1992 and 1993 to represent a wide range of hydrologic conditions. Bed-sediment samples were collected during low flows in 1993, when sediment transport is minimal. In Phase II, water samples were collected in the spring of 1994 after the first high-flow event following the application of agricultural fertilizers and pesticides and in the fall during the first high-flow events following the conclusion of the agricultural season.

SAMPLE COLLECTION, PROCESSING, AND ANALYSIS

Cleaning Procedures

In preparation for water-quality sampling, all sampling and processing equipment was thoroughly cleaned according to the following procedures: Trace-element-sampling and processing equipment was washed in dilute (0.1 percent) low-phosphate soap and tap water

Table 2. Water-quality sampling sites from Phases I and II of the Willamette River Basin Water Quality Study, Oregon, 1992–94

Map index number	Site name	Site number	Site type	Sampled in study Phase
1	CF Willamette R bl Big R nr London, OR	433548123040600	Forest	II
2	CF Willamette R at Seavy Loop Rd nr Eugene, OR	440045122585600	Integrator	II
3	A-3 Channel at Wallis and 5th St Eugene, OR	440313123091100	Urban-industrial	I
4	Urban outfall at Polk St Park at Eugene, OR (Urban outfall at Greenway Bicycle Bridge, Eugene, OR)	440402123063900	Urban	II
5	Mack Cr nr Blue River, OR	441310122095801	Forest	II
6	McKenzie R nr Coburg, OR	14165500	Integrator	I
7	McKenzie R nr Eugene, OR	440707123041300	Integrator	II
8	Long Tom R at Bundy Bridge nr Monroe, OR	442223123153703	Agriculture	II
9	Lake Camous Cr at Pine Grove Dr nr Harrisburg, OR	442413123122500	Agriculture	II
10	Willamette R nr Corvallis, OR	443207123145500	Integrator	I
11	Muddy Cr nr Peoria, OR	443138123120901	Agriculture	both
12	Rock Cr ab Griffith Cr nr Philomath, OR	443045123273000	Forest	II
13	Marys R at Corvallis, OR	443321123155201	Integrator	II
14	Calapooia R at Albany, OR	14173500	Agriculture	II
15	Calapooia R at mouth nr Albany, OR	443819123064000	Agriculture	I
16	Middle Fourth Lk nr Albany, OR	444032123050600	Urban-industrial	I
17	Luckiamute R at Buena Vista Rd nr Buena Vista, OR	444349123094000	Integrator	II
18	Thomas Cr at Kelly Rd nr Jefferson, OR	444123122562200	Agriculture	II
19	Santiam R at Jefferson, OR	14189000	Integrator	II
20	Santiam R nr Jefferson, OR	444416123030800	Integrator	I
21	Rickreall Cr nr Rickerall, OR	445543123084400	Agriculture	I
22	Rickreall Cr nr mouth nr Salem, OR	445547123065400	Agriculture	II
23	Pringle Cr at Bush Park at Salem, OR	14190970	Urban	II
24	Mill Cr at Delaney Rd nr Turner, OR	445037122573800	Agriculture	II
25	South Yamhill R at McMinnville, OR	14194150	Agriculture	II
26	North Yamhill R at Hwy 99W nr McMinnville, OR	451355123093600	Agriculture	II
27	Palmer Cr at Dayton, OR	451309123041501	Agriculture	I
28	Yamhill R at Dayton, OR	451320123041100	Agriculture	I
29	Willamette R nr Newberg, OR	451705122575100	Integrator	I
30	Willamette R at Hwy 219 nr Newberg, OR	451602122564400	Integrator	II
31	Champoeg Cr bl Mission Cr nr Butteville, OR	451502122524700	Agriculture	II
32	Zollner Cr nr Mt Angel, OR	14201300	Agriculture	both
33	Pudding R at Aurora, OR	14202000	Agriculture	both
34	Molalla R at Knights Bridge nr Canby, OR	451603122423301	Integrator	II
35	Dairy Cr at Rte 8 nr Hillsboro, OR	14206200	Agriculture	II
36	Beaverton Cr at Beaverton, OR	452950122492900	Urban	I
37	Bronson Cr at 185th Ave nr Aloha, OR	14206298	Urban	II
38	Beaverton Cr nr Orenco, OR	453115122535500	Urban-industrial	I
39	Fanno Cr at Durham, OR	14206950	Urban	both
40	Tualatin R at West Linn, OR	14207500	Integrator	II
41	Clackamas R at Oregon City, OR	452221122362400	Integrator	I
42	Johnson Cr at Palmblad Rd nr Gresham, OR	452823122240900	Agriculture	II
43	Johnson Cr at Hogan Rd nr Gresham, OR	452847122244500	Agriculture	I
44	Johnson Cr at Milwaukie, OR	14211550	Urban	I
45	Commercial-Residential runoff at Harbor Way at Portland, OR	453043122402200	Urban	II
46	Willamette R at Portland Harbor, OR	14211720	Integrator	II
47	Interstate 84 Trans Corridor at SE 3rd at Portland, OR	453154122394200	Urban	II
48	Willamette R at St Johns Bridge at Portland, OR	14211805	Integrator	II
49	Willamette R at Linnton, OR	453547122463000	Integrator	I
50	Beaver Cr nr Troutdale, OR (Sandy River Basin)	453205122223701	Integrator	I

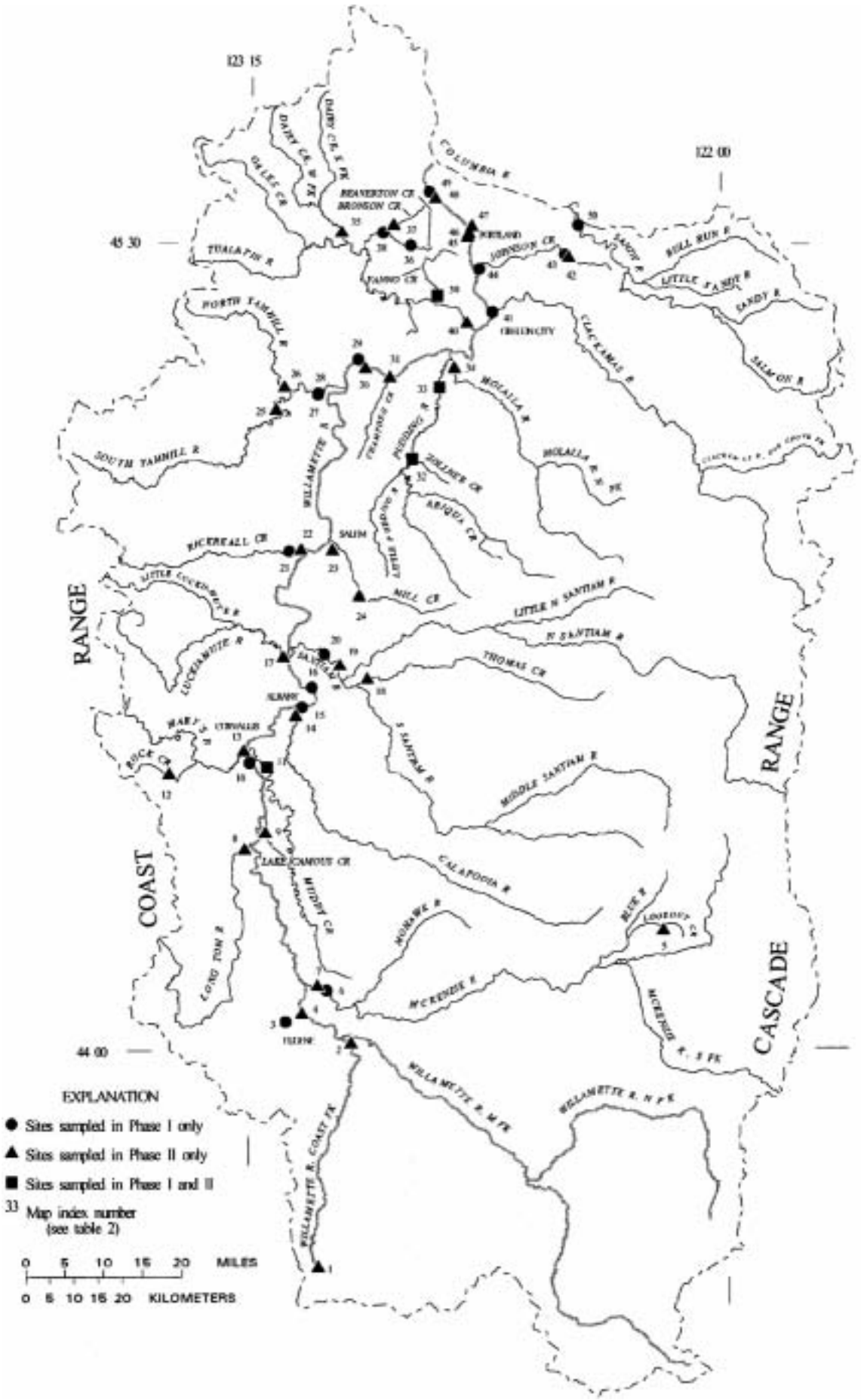

Figure 2. Sampling sites from Phases I and II of the Willamette River Basin Water Quality Study, Oregon, 1992–94

Table 3. Sampling plan for Phase I of the Willamette River Basin Water Quality Study, Oregon 1992–93

[Sites are listed in downstream order by land use TYPE (A, agricultural, I, integrator, U, urban-industrial) and can be located in figure 2 by Map index number; Misc, miscellaneous analyses, including flow, water temperature, specific conductance, pH, dissolved oxygen, suspended sediment, and dissolved and suspended organic carbon; WW, whole water; FW, filtered water; SS, suspended sediment; BED, bed sediment; Acids, organic acids; VOC, volatile organic compounds; GCMS, analysis of filtered water by gas chromatography and mass spectroscopy; HPLC, analysis of filtered water by high performance liquid chromatography; Nutr, nutrients in whole and filtered water; OC/OP, organochlorine and organophosphorus compounds; PCDD/PCDF, dioxin and furan compounds; refer to Appendix for list of specific constituents]

Map index number	Station name	Station number	Site type	Date	Misc	Nutr	Trace elements				Organic compounds													
											OC/OP				SEMI-VOLATILE				PESTICIDES		VOC	Acids	PCDD/PCDF	
							WW	FW	SS	BED	WW	FW	SS	BED	WW	FW	SS	BED	GCMS	HPLC	WW	WW	SS	BED
3	A-3 Channel at Wallis and 5th St	440313123091100	U	920416	X							X	X			X	X		X		X	X	X	
	at Eugene, OR			920825						X				X				X						X
				921016	X		X	X				X	X			X	X		X		X	X		
				921029	X		X	X	X										X					
16	Middle Fourth Lake nr Albany, OR	444032123050600	U	920901						X				X				X						X
36	Beaverton Cr at Beaverton, OR	452950122492900	U	920823					X	X				X				X						X
38	Beaverton Cr nr Orenco, OR	453115122535500	U	930331	X		X	X				X	X		X	X	X		X	X	X			
39	Fanno Cr at Durham, OR	14206950	U	930301	X		X	X	X			X	X			X	X		X		X			
				930722	X	X	X	X			X				X				X	X	X			
44	Johnson Cr at Milwaukie, OR	14211550	U	930314	X		X	X	X			X	X			X	X		X		X			
6	McKenzie R nr Coburg, OR	14165500	I	920825						X				X				X						
10	Willamette R nr Corvallis, OR	443207123145500	I	930824	X	X	X	X			X				X				X	X	X			
				920826						X				X				X						X
20	Santiam R nr Jefferson, OR	444416123030800	I	920829						X				X				X						
29	Willamette R at Newberg, OR	451705122575100	I	920901						X				X				X						X
41	Clackamas R nr Oregon City, OR	452221122362400	I	920824						X				X				X						
49	Willamette R at Linnton, OR	453547122463000	I	920418	X		X	X	X															
				920909						X				X				X						X
				921026	X		X	X					X			X	X		X		X	X		
50	Beaver Cr nr Troutdale, OR	453225122223701	I	920822						X				X				X						X
11	Muddy Cr nr Peoria, OR	443138123120901	A	930824	X	X	X	X			X				X				X	X	X			
15	Calapooia R at mouth nr Albany, OR	443819123064000	A	920826						X				X				X						
21	Rickreall Cr nr Rickerall, OR	445543123084400	A	920828						X				X				X						
27	Palmer Cr at Dayton, OR	451309123041501	A	930907	X	X	X	X			X				X				X	X	X			
28	Yamhill R at Dayton, OR	451320123041100	A	920827						X				X				X						X
				930907	X	X					X								X	X				
32	Zollner Cr nr Mt Angel, OR	14201300	A	930601	X		X	X	X			X	X				X		X	X	X			
				930727	X	X	X	X			X				X				X	X	X			
33	Pudding R at Aurora, OR	14202000	A	930427	X		X	X	X			X	X			X	X		X	X	X			
43	Johnson Cr at Hogan Rd nr Gresham, OR	452847122244500	A	920821						X				X				X						

Table 4. Sampling plan for Phase II of the Willamette River Basin Water Quality Study, Oregon, Spring 1994

[Sites are listed in downstream order by land use TYPE (A, agricultural, F, forested, I, integrator, U, urban-industrial) and can be located in figure 2 by Map index number; Misc, miscellaneous analyses, including flow, water temperature, specific conductance, pH, dissolved oxygen, suspended sediment, and dissolved and suspended organic carbon; Nutr includes minimum of nitrite plus nitrate in filtered water and total phosphorus; Organics, pesticides in filtered water by solid phase extraction and gas chromatography/mass spectroscopy or high performance liquid chromatography; Triazines, low-level triazine herbicides in filtered water; OC-WW, organochlorine compounds in whole water; VOC, volatile organic compounds; TE-WW, total recoverable trace elements in whole water and hardness; TE-FW, trace elements in filtered water; refer to Appendix for list of specific constituents]

Map index number	Station name	Station number	Site type	Date	Misc	Nutr	TE-WW	TE-FW	Organics	Triazines	OC-WW	VOC
4	Urban Outfall at Polk St Park at Eugene, OR	440402123063900	U	940613	X	X		X	X	X	X	X
37	Bronson Cr at 185th Ave nr Aloha, OR	14206298	U	940527	X	X	X		X	X	X	
45	Urban runoff at Harbor Way at Portland, OR	453043122402200	U	940617	X	X	X	X	X	X	X	
47	Interstate 84 runoff at Portland, OR	453154122394200	U	940531	X	X	X	X	X	X	X	X
1	CF Willamette R bl Big R nr London, OR	433548123040600	F	940520	X	X	X		X	X	X	
5	Mack Cr nr Blue River, OR	441310122095801	F	940527	X	X			X	X	X	
12	Rock Cr ab Griffith Cr nr Philomath, OR	443045123273000	F	940518	X	X			X	X	X	
2	CF Willamette R at Seavey Loop Rd nr Eugene, OR	440045122585600	I	940519	X	X	X		X	X	X	
7	McKenzie R nr Eugene, OR	440707123041300	I	940519	X	X			X	X	X	
13	Marys R at Corvallis, OR	443321123155201	I	940518	X	X	X		X	X	X	
17	Luckiamute R nr Buena Vista, OR	444349123094000	I	940516	X	X			X	X	X	
19	Santiam R at Jefferson, OR	14189000	I	940517	X	X			X	X	X	
30	Willamette R at Hwy 219 nr Newberg, OR	451602122564400	I	940531	X	X	X	X	X	X	X	
34	Molalla R nr Canby, OR	451603122423301	I	940525	X	X			X	X	X	
40	Tualatin R at West Linn, OR	14207500	I	940525	X	X	X		X	X	X	
48	Willamette R ab St. John's Bridge at Portland, OR	14211805	I	940523	X	X	X		X	X	X	
9	Lake Camous Cr at Pine Grove Dr nr Harrisburg, OR	442413123122500	A	940519	X	X			X		X	
18	Thomas Cr at Kelly Rd nr Jefferson, OR	444123122562200	A	940516	X	X			X	X	X	
22	Rickreall Cr nr mouth nr Salem, OR	445547123065400	A	940526	X	X			X	X	X	
24	Mill Cr at Delaney Rd nr Turner, OR	445037122573800	A	940614	X	X	X		X	X	X	
25	S. Yamhill R at McMinneville, OR	14194150	A	940517	X	X	X		X	X	X	
26	N. Yamhill R nr McMinneville, OR	451355123093600	A	940517	X	X			X	X	X	
31	Champoeg Cr bl Mission Cr nr Butteville, OR	451502122524701	A	940526	X	X			X	X	X	
33	Pudding R at Aurora, OR	14202000	A	940412	X	X			X			
35	Dairy Cr at Rte 8 nr Hillsboro, OR	14206200	A	940527	X	X			X	X	X	
42	Johnson Cr at Palmblad Rd nr Gresham, OR	452823122240900	A	940524	X	X			X	X	X	

Table 5. Sampling plan for Phase II of the Willamette River Basin Water Quality Study, Oregon, Fall 1994

[Sites are listed in downstream order by land use TYPE (A, agricultural, I, integrator, U, urban-industrial) and can be located in figure 2 by Map index number; Misc, miscellaneous analyses, including flow, water temperature, specific conductance, pH, dissolved oxygen, suspended sediment, and dissolved- and suspended-organic carbon; Nutr includes minimum of nitrite plus nitrate in filtered water and total phosphorus; Organics, pesticides in filtered water by solid phase extraction and gas chromatography/mass spectroscopy or high performance liquid chromatography; Triazines, low-level triazine herbicides in filtered water; OC-WW, organochlorine compounds in whole water; OC-FW, organochlorine compounds in filtered water; OC-SS, organochlorine compounds in suspended sediment; VOC, volatile organic compounds; TE-WW, total recoverable trace elements in whole water and hardness; TE-FW, trace elements in filtered water; refer to Appendix for list of specific constituents]

Map index number	Station name	Station number	Site type	Date	Misc	Nutr	TE-WW	TE-FW	Organics	Triazines	OC-WW	OC-FW	OC-SS	VOC
23	Pringle Cr at Bush Park at Salem, OR	14190970	U	941123	X	X	X	X	X	X	X			
				941130	X	X	X		X	X	X			
				941130	X	X	X		X	X	X			
37	Bronson Cr at 185th Ave nr Aloha, OR	14206298	U	941123	X	X	X	X	X	X	X			X
39	Fanno Cr at Durham, OR.	14206950	U	941027	X	X	X		X	X	X			
47	Interstate 84 runoff at Portland, OR	453154122394200	U	941108	X	X	X	X	X	X	X	X	X	X
				941108	X	X	X		X	X	X			
				941130	X	X	X		X	X	X			X
				941130	X	X	X		X	X	X			
				941202	X	X	X		X	X	X			
40	Tualatin R at West Linn, OR	14207500	I	941028	X	X	X		X	X	X			
46	Willamette R at Portland harbor, OR	14211720	I	941025	X	X		X	X					
				941029	X	X	X	X	X	X	X	X	X	
				941103	X	X		X	X	X	X			
8	Long Tom R at Bundy Bridge nr Monroe, OR	442223123153703	A	941101	X	X			X	X	X			
11	Muddy Cr nr Peoria, OR	443138123120901	A	941102	X	X			X	X	X	X	X	
				941106	X	X			X	X	X	X	X	
				941109	X	X			X	X	X			
14	Calapooia R at Albany, OR	14173500	A	941101	X	X			X	X	X			
24	Mill Cr at Delaney Rd nr Turner, OR	445037122573800	A	941031	X	X			X	X	X			
				941104	X	X			X	X	X	X	X	
				941104	X	X			X	X	X			
25	S. Yamhill R at McMinneville, OR	14194150	A	941102	X	X			X	X	X			
31	Champoeg Cr bl Mission Cr nr Butteville, OR	451502122524700	A	941031	X	X			X	X	X			
32	Zollner Cr nr Mount Angel, OR	14201300	A	941028	X	X			X	X	X			
33	Pudding R at Aurora, OR	14202000	A	941028	X	X			X	X	X	X	X	
				941029	X	X			X	X	X			
				941109	X	X			X	X	X			
35	Dairy Cr at Rte 8 nr Hillsboro, OR	14206200	A	941201	X	X	X		X	X	X			
42	Johnson Cr at Palmblad Rd nr Gresham, OR	452823122240900	A	941027	X				X	X	X	X	X	
				941028	X	X			X	X	X	X	X	
				941101	X	X			X	X	X			
				941103	X	X	X		X	X	X			
				941123	X	X			X	X	X			

then rinsed with copious amounts of hot tap water, dilute (5 percent) nitric (Phase I) or (5 percent) hydrochloric (Phase II) acid solution, and distilled-deionized water. Organic-sampling and processing equipment was washed in the same manner with the addition of a final reagent-grade methanol rinse. Organic-carbon-sample processing equipment was washed in the low-phosphate soap and tap water then rinsed with hot tap water, distilled-deionized water, and finally with organic-free blank water. Glass collection bottles were washed in low-phosphate soap and tap water, rinsed with hot tap water followed by distilled-deionized water, and baked for 8 hours at 325^{o} C. One-time-use polyethylene shipment bottles were rinsed with native water; bottles designated for trace-element samples were acid rinsed.

Field Collection

Field measurements of water temperature, pH, specific conductance, and dissolved oxygen were made using Hydrolab multi-parameter probes. Data were collected near the center of flow at one-meter depth or less below the water surface (Phase I) or were averaged from a minimum of five verticals in the sampling cross section (Phase II). Hydrolabs were calibrated each day before and after sampling. Discharge measurements were made in accordance with standard USGS procedures (Rantz and others, 1982) or determined from established stage-discharge relationships. For urban outflows sampled through manholes, discharge was estimated.

With the exception of dissolved organic carbon (DOC), and volatile organic compounds (VOC), water samples were collected using a D-77 or a DH-81 depth-integrating sampler specially fitted with a Teflon 3-liter bottle, nozzle, and head assembly to minimize contamination. Water was collected from 5 equal-discharge interval (EDI) verticals in the cross section (Phase I) or from 10 verticals using the equal-width increment (EWI) method (Phase II). Both the EDI and EWI methods are described by Edwards and Glysson (1988).

Water for DOC analysis was collected in a baked glass bottle by grab sample at the centroid of flow. To minimize aeration, water for VOC analysis was collected at the centroid of flow by hand dipping 40-milliliter amber-glass vials (fitted with septum caps) below the water surface. VOC samples were unpreserved (Phase I) or preserved in the field with 2 drops of concentrated VOC-free hydrochloric acid (Phase II).

Sampling for trace elements was conducted using clean procedures as outlined by Horowitz and others (1994), and these samples were collected concurrently with organic samples. Bed-sediment samples were collected with an Ekman dredge or Teflon scoop at 10 depositional areas at each site. Protocols for bed sampling are described by Shelton and Capel (1994).

During Phase I, water for analysis of organic compounds was composited into 10-gallon stainless steel milk containers, and water for analysis of suspended sediment was composited into polyethylene churn splitters. During Phase II, water for organic compounds, suspended organic carbon (SOC), and sediment analyses was split from the 3-liter Teflon collection bottles into 1-liter baked amber-glass bottles using a Teflon cone splitter encased in a clean chamber. Water samples for trace element and nutrient analyses were composited and transported in 10-liter polycarbonate carboys (Phase I) or into a churn splitter (Phase II) previously soaked in high-purity hydrochloric acid (5 percent by volume) as described by Horowitz and others (1994).

Sample Processing

Except during processing, all samples were kept chilled from the time of collection until analysis. Processing of field samples, including filtration and preservation, was accomplished at the USGS Oregon District laboratory in Portland.

Samples for analysis of organic constituents in filtered water were filtered through 0.7-micrometer pore size baked, glass-fiber filters. Samples for analysis of pesticides by gas chromatography/mass spectroscopy (GC/MS) or high performance liquid chromatography (HPLC) (USGS schedules 2010 and 2051, respectively) were further processed using solid-phase extraction (SPE) techniques (Sandstrom, 1989; Werner, S.L., Burkhardt, M.R., and deRusseau, S.N., USGS National Water Quality Laboratory, unpub. data, 1994). Samples for analysis of triazine compounds

in filtered water were shipped in 1-liter baked amber-glass bottles.

During Phase I, organic compounds associated with suspended sediment were dewatered by filtration through a baked 1-micrometer pore size, 293-millimeter diameter, glass-fiber filter and analyzed on the filter media as the suspended phase; the resulting filtrate was analyzed as the dissolved phase. A representative sample of the whole water was analyzed as the total recoverable sample. One hundred- to 200-liter water samples were generally required to obtain a sufficient sediment mass for analysis. Over 350 liters of water were required to analyze polychlorinated dibenzo-p-dioxin (PCDD) and polychlorinated dibenzofuran (PCDF) in suspended sediment.

Samples for organochlorine (OC) compounds in whole water were shipped in 1-liter baked amber-glass bottles without filtration. Samples for analysis of OC associated with filtered water were filtered through baked 0.7-micrometer pore size, glass-fiber filters and shipped in 1-liter baked amber-glass bottles. Samples for analysis of OC in suspended sediment were collected on a baked 0.7-micrometer pore size, glass-fiber filters. The volume of water filtered was noted and the filters were wrapped in baked aluminum foil for shipment.

SOC samples were filtered through a 0.45-micrometer pore size, silver filter in a stainless steel column pressurized with water-pumped nitrogen gas, and the volume of sample, usually 10 to 25 milliliters, was noted. DOC samples were collected from the same column into 125-milliliter, baked amber glass bottles.

During Phase I, trace elements associated with suspended sediment were dewatered by centrifugation; centrifugation time was based on Stokes' Law and computed as the time under centrifugal acceleration to settle all suspended particles greater than 0.45 micrometers in diameter. Fifty- to 100-liter water samples generally were required to obtain sufficient sediment mass for analysis. The resulting supernatant was preserved with 0.5 milliliters of high-purity nitric acid per 250 milliliters of sample, and analyzed as the dissolved phase. A representative portion of the whole water sample was preserved with high-purity nitric acid and analyzed as the total recoverable sample.

In Phase II, trace elements and nutrients in filtered water were filtered through 0.45-micrometer pore size, capsule filters into polyethylene bottles using procedures outlined by Horowitz and others (1994). Both whole- and filtered-water trace-element samples were preserved with 0.5 milliliters of high-purity nitric acid per 250 milliliters of sample; nutrient samples were not preserved.

Laboratory Analysis

All chemical analyses were conducted at the USGS National Water Quality Laboratory (NWQL) in Arvada, Colorado, with the exception of PCDD and PCDF compounds associated with bed and suspended sediment and trace elements associated with suspended sediment. PCDD and PCDF compounds were analyzed by a USGS-Contract Laboratory, Quanterra, located in West Sacramento, California, using high resolution GC/MS. Trace elements associated with suspended sediment were analyzed by the USGS Geologic Division Laboratory located in Denver, Colorado. Suspended-sediment-concentration analyses and the computation of percent finer than sand (less than 62-micrometer sieve diameter) were made by the USGS Sediment laboratory in Vancouver, Washington, as outlined by Guy (1969). Table 6 summarizes the analyses conducted and references the appropriate table(s) in this report where data are presented. Refer to Appendix for constituents analyzed, their U.S. Environmental Protection Agency STOrage and RETrieval (STORET) codes (if one exists), applicable minimum reporting level (MRL) or method detection limits (MDL), and reporting units.

The MRL is the smallest measured concentration of a constituent that may be reliably reported using a given analytical method (U.S. Environmental Protection Agency, 1992). The MDL is the minimum concentration of a substance that can be identified, measured, and reported in pure water with a 99-percent confidence that the analyte concentration is greater than zero (U.S. Environmental Protection Agency, 1992). The MDL is based on replicate spikes, above which

Table 6. Summary of water-quality analyses conducted during Phases I and II of the Willamette River Basin Water Quality Study, Oregon, 1992–94

[USGS, U.S. Geological Survey; NWQL, USGS National Water Quality Laboratory, Arvada CO; GD, USGS Geologic Division laboratory, Denver, CO; CL, contract laboratory, Quanterra, West Sacramento, CA; OR, Oregon district laboratory, Portland, OR; WA, USGS sediment laboratory, Vancouver, WA; SPE, solid phase extraction, GC/MS, gas chromatography/mass spectroscopy; HPLC, high performance liquid chromatography; EPA, U.S. Environmental Protection Agency]

Constituent group	Analysis location	Laboratory schedule	Phase sampled	Reference or analytical method	Table(s) in this report
Ancillary data	NWQL, OR, WA	--	both	--	7, 8
Nutrients in whole and filtered water	NWQL	2702	both	Fishman (1993)	9, 10
Trace elements in whole water	NWQL	--	both	Fishman (1993)	11, 12
Trace elements in filtered water	NWQL	--	both	Fishman (1993)	13, 14
Trace elements associated with suspended sediment	GD	--	I	Arbogast (1990)	15
Trace elements associated with bed sediment	NWQL	2400	I	Arbogast (1990)	16
Organochlorine and organophosphorus compounds in whole water	NWQL	1399	I	Wershaw and others (1987)	17
Organochlorine and organophosphorus compounds in filtered water	NWQL	8307	I	Wershaw and others (1987)	19
Organochlorine and organophosphorus compounds associated with suspended sediment	NWQL	8308	I	Wershaw and others (1987)	21
Organochlorine compounds associated with bed sediment	NWQL	2501	I	Foreman and others (1995)	23
Organochlorine compounds in whole water	NWQL	1398	II	Wershaw and others (1987)	18
Organochlorine compounds in filtered water	NWQL	8369	II	Wershaw and others (1987)	20
Organochlorine compounds associated with suspended sediment	NWQL	8370	II	Wershaw and others (1987)	22
Organic acids in whole water	NWQL	8331	I	Wershaw and others (1987)	24
Semi-volatile compounds in whole water	NWQL	1383	I	Wershaw and others (1987)	25
Semi-volatile compounds in filtered water	NWQL	8005	I	Wershaw and others (1987)	26
Semi-volatile compounds associated with suspended sediment	NWQL	8006	I	Wershaw and others (1987)	27
Semi-volatile compounds associated with bed sediment	NWQL	2502	I	Furlong and others (USGS, unpub. data, 1994)	28
Volatile organic compounds in whole water	NWQL	1392, 1401	I	Rose and Schroeder (1995)	29
Volatile organic compounds in whole water	NWQL	2090	II	Rose and Schroeder (1995)	30
Polychlorinated dibenzo-p-dioxin associated with suspended sediment	CL	--	I	EPA method 8290	31
Polychlorinated dibenzo-p-dioxin associated with bed sediment	CL	--	I	EPA method 8290	32
Polychlorinated dibenzo-furans associated with suspended sediment	CL	--	I	EPA method 8290	33
Polychlorinated dibenzo-furans associated with bed sediment	CL	--	I	EPA Method 8290	34
Pesticides in filtered water analyzed by SPE and GC/MS	NWQL	2010	both	Zaugg and others (in press)	35, 36
Pesticides in filtered water analyzed by SPE and HPLC	NWQL	2051	both	Werner and others (USGS, unpub. data, 1994)	37, 38
Triazines herbicides in filtered water	NWQL	8015	II	Sandstrom and others (1994)	39

reported detections for the particular constituent represent actual detections. Detections may be reported below the MDL; however, they may have a greater than 1-percent chance of representing false positive detections, that is, indicating that the analyte is present when it actually is not. The MRL is generally higher than the MDL because of unpredictable matrix effects for different waters. For PCDD and PCDF analyses the MRL varied with each sample and, in some cases, is reported as a range. For some bed sediment samples and all suspended sediment samples, the MRL was determined from the quality assurance method blanks.

At the NWQL, pesticide samples (USGS schedules 2010 and 2051) were extracted from solid-phase extraction cartridges with a solvent and analyzed by GC/MS (Zaugg and others, 1995) or HPLC (Werner, S.L.,Burkhardt, M.R., and deRusseau, S.N., USGS National Water Quality Laboratory, unpub. data, 1994). Triazine samples in filtered water were analyzed by GC/MS according to the method of Sandstrom and others (1994), modified to achieve lower MDL by the extraction of more water than originally specified for the method.

OC samples in whole water (USGS schedule 1398) were analyzed by GC according to method 0-3104-83 (Wershaw and others, 1987). OC samples in filtered water (USGS schedule 8369) were analyzed by GC according to method 0-1104-83, modified to achieve lower MDL by concentrating the final extract by a factor of 10. OC samples associated with suspended-sediment (USGS schedule 8370) were analyzed by GC according to method 0-7104-83, modified to achieve lower MDL by filtering up to 4 liters of water to obtain sediment.

VOC samples were analyzed by purge and trap followed by GC/MS as described by Rose and Schroeder (1995). DOC and SOC samples were analyzed as described by Wershaw and others (1987). Analysis of OC and semi-volatile organic compounds in bed sediment were analyzed using GC/MS as described by Foreman and others (1995) and Furlong, E.T., Vaught, D.G., Merten, L.M., Foreman, W.T., and Gates, P.M. (USGS, unpub. data, 1994), respectively.

Analysis of trace elements associated with suspended and bed sediment were performed according to procedures described by Arbogast (1990). Filtered-water trace-element samples were analyzed by inductively coupled plasma and mass spectroscopy (ICP/MS) in a clean room designed to minimize metallic contamination. Samples for nutrients, hardness, and trace elements in whole water were analyzed according to Fishman (1993).

QUALITY ASSURANCE

To ensure the collection of representative samples from the water column, all water samples in this study were depth- and width- integrated using procedures outlined by Edwards and Glysson (1988). In addition, about 15 percent of the water samples were quality-control samples used to assess the accuracy and precision of the water-quality data collected in this study. Since Phase I sites and the constituents sampled were generally coincident with the ongoing Willamette Basin NAWQA study, which had its own quality-control sampling plan, no additional quality-control samples were taken. Phase I quality assurance data are not presented in this report. A combination of the following quality-control samples were collected:

(1) Blank—Contaminant-free water sent to the laboratory as a routine sample or contaminant free water analyzed at the laboratory as part of their internal quality-control procedures. These samples do not come in contact with sampling and processing equipment. They indicate laboratory accuracy of baseline concentrations.

(2) Field blank—Requires passing a volume of contaminant-free water through all sampling and processing equipment that the water samples contact. These samples are preserved and analyzed along with regular water samples. Results are used to assess equipment cleaning procedures, and identify contamination introduced by sampling protocols and (or) sample handling and transport.

(3) Split —A large volume of native water sample is divided into two or more samples and analyzed individually. Results are used to estimate the combined effects of processing and laboratory precision and (or) bias.

(4) Standard reference—Contaminant-free water spiked with known concentrations of analytes. These samples do not contact sampling or processing equipment and provide estimates of analytical accuracy and bias.

(5) Field matrix spikes—A standard spike solution added to a split of the regular water sample. These samples are processed and analyzed in the same manner as the regular water samples and are used to assess the analytical precision and recovery rates of analytes from matrices of native water.

(6) Surrogate spikes—Addition of compounds that behave similar to target analytes to each sample to asses the analytical precision and percent recovery from the sample matrix. Percent recovery of surrogates are expected to be greater than or equal to the recovery rates of target analytes.

Quality-control results for Phase II replicate, split, and spike samples are summarized in tables 40 through 48. Blank and field blank quality-control sample results indicated possible whole-water trace-element contamination in Phase II spring sampling for copper, nickel, and zinc; this contamination makes low-level (1 to 2 micrograms per liter) concentrations for these elements questionable. The contamination might be attributable to metal springs in the spigots of churn splitters. Spigots made entirely of plastic were installed for the fall sampling. No detection of organic compounds occurred in any of the blank or field blank samples.

REFERENCES CITED

Arbogast, B.F. (ed), 1990, Quality assurance manual for the Branch of Geochemistry: U.S. Geological Survey Open-File Report 90–668, 184 p.

Edwards, T.K. and Glysson, D. G.,1988, Field methods for measurement of fluvial sediment: U.S. Geological Survey Open-File Report 86–531, 118 p.

Fegeas, R.G., Claire, R.W., Guptill, S.C., Anderson, K.E., and Hallam, C.A., 1983, U.S. Geological Survey digital cartographic data standards—land use and land cover digital data: U.S. Geological Survey Circular 895–E, 21p.

Fishman, M.J., (ed), 1993, Methods of analysis by the U.S. Geological Survey National Water-Quality Laboratory—Determination of inorganic and organic constituents in water and fluvial sediments: U.S. Geological Survey Open-File Report 93–125, 217 p.

Foreman, W.T., Connor, B.F., Furlong, E.T., Vaught, D.G., and Merten, L.M., 1995, Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of organochlorine pesticides and polychlorinated biphenyls in bottom sediment by dual capillary-column gas chromatography with electron-capture detection: U.S. Geological Survey Open-File Report 95–140, 78 p.

Guy, H.P., 1969, Laboratory theory and methods of sediment analysis: U.S. Geological Survey Techniques of Water-Resources Investigations, book 5, chapter C1, 58 p.

Horowitz, A.J., Demas, C.R., Fitzgerald, K.K., Miller, T.M., and Rickert, D.A., 1994, U.S. Geological Survey protocol for the collection and processing of surface-water samples for the subsequent determination of inorganic constituents in filtered water: U.S. Geological Survey Open-File Report 94–539, 57 p.

Kammerer, J.C., 1990, Largest rivers in the United States: U.S. Geological Survey Open-File Report 87–242, 2 p.

Rantz, S.E., and others, 1982, Measurement and Computation of Streamflow: U.S. Geological Survey Water Supply Paper 2175, 2 vol., 631p.

Rose D.L., and Schroeder, M.P., 1995, Methods of analysis by the U.S. Geological Survey National Water-Quality Laboratory—Determination of volatile organic compounds in water by purge and trap capillary gas chromatography/mass spectrometry: U.S. Geological Survey Open-File Report 94–708, 26 p.

Sandstrom, M.W., Wydoski, D.S., Schroeder, M.P., Zamboni, J.L., and Foreman, W.T., 1994, Methods of analysis by the U.S. Geological Survey National Water-Quality Laboratory —Determination of organonitrogen herbicides in water by solid-phase extraction and capillary column gas chromatography/mass spectrometry with selected-ion monitoring: U.S. Geological Survey Open-File Report 91–519, 26 p.

Sandstrom, M.W., 1989, Field method for isolation of herbicides in surface and ground water using solid-phase extraction, *in* Pederson, G.L.,and Smith, M.M., eds., U.S. Geological Survey second national symposium on water quality—Abstracts of the technical sessions, Orlando, Florida, November 12–17, 1989: U.S. Geological Survey Open-File Report 89–409, p. 82.

Shelton, L.R. and Capel, P.D., 1994, Guidelines for collecting and processing samples of stream bed sediment for analysis of trace elements and organic contaminants for the National Water-Quality Assessment Program: U.S. Geological Survey Open-File Report 94–458, 20 p.

Timme, P.J., 1994, National Water Quality Laboratory 1994 Services catolog: U.S. Geological Survey Open-File report 94–304, 103 p.

U.S. Environmental Protection Agency, 1992, Guidelines establishing test procedures for the analysis of pollutants: U.S. Code of Federal Regulations, Title 40, p. 565–567.

Wershaw, R.L., Fishman, M.J., Grabbe, R.R., and Lowe, L.E., eds., 1987, Methods for the determination of organic substances in water and fluvial sediments: U.S. Geological Survey Techniques of Water-Resources Investigations, book 5, chapter A3, 80 p.

Zaugg, S.D., M.W. Sandstrom, S.G. Smith, and K.M. Fehlberg, 1995, Methods of analysis by the U.S. Geological Survey National Water-Quality Laboratory—Determination of pesticides in water by C–18 solid-phase extraction and capillary-column gas chromatography/mass spectrometry with selected-ion monitoring: U.S. Geological Survey Open-File Report 95–181, 49 p.

ANALYTICAL DATA

Data in the following tables were not aligned on decimal points and trailing zeros to the right of the decimal points were not removed. Method detection limits and minimum reporting levels are listed in Appendix, and quality-assurance data are listed in tables 40 through 48. Additional Willamette Basin NAWQA samples are included in the following tables which were not listed in tables 3, 4, and 5.

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Table 7. Ancillary data from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93

STATION NUMBER	STATION NAME	DATE	TIME
440313123091100	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	04-16-92	1410
	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	10-16-92	1345
	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	10-29-92	1000
443207123145500	WILLAMETTE RIVER NEAR CORVALLIS, OR	08-24-93	1615
443138123120901	MUDDY CREEK NEAR PEORIA, OR	08-24-93	1300
451309123041501	PALMER C AT DAYTON, OR	09-07-93	1045
451320123041100	YAMHILL RIVER AT DAYTON, OR	09-07-93	1420
14201300	ZOLLNER CREEK NEAR MT ANGEL, OR	06-01-93	1115
	ZOLLNER CREEK NEAR MT ANGEL, OR	07-27-93	1015
14202000	PUDDING RIVER AT AURORA, OREG.	04-27-93	1445
453115122535500	BEAVERTON C AT 216TH AVE NEAR ORENCO, OR	03-31-93	1810
14206950	FANNO CREEK AT DURHAM, OR	03-01-93	1830
	FANNO CREEK AT DURHAM, OR	07-22-93	1000
14211550	JOHNSON CREEK AT MILWAUKIE,OREG.	03-14-93	1745
453547122463000	WILLAMETTE RIVER AT LINNTON, OR	04-18-92	0900
	WILLAMETTE RIVER AT LINNTON, OR	10-26-92	1000

Table 7. Ancillary data from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992-93—Continued

STATION NUMBER	DATE	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	DISCHARGE, INST. CUBIC FEET PER SECOND	SEDIMENT, SUSPENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SPECIFIC CONDUCTANCE (US/CM)	OXYGEN, DISSOLVED (MG/L)
440313123091100	04-16-92	17.5	--	12	63	98	124	--
	10-16-92	13.0	759	0.17	6	98	284	11.8
	10-29-92	12.0	741	17	90	97	35	--
443207123145500	08-24-93	17.0	765	6640	4	90	59	10.2
443138123120901	08-24-93	19.0	766	38	14	95	159	7.5
451309123041501	09-07-93	18.0	766	15	4	90	116	8.0
451320123041100	09-07-93	20.5	766	40	8	91	183	8.7
14201300	06-01-93	15.5	759	12	33	98	328	7.7
	07-27-93	16.5	760	1.0	13	96	378	7.2
14202000	04-27-93	10.0	770	3100	27	--	65	10.4
453115122535500	03-31-93	11.0	754	37	10	99	221	9.8
14206950	03-01-93	--	766	164	203	92	134	--
	07-22-93	17.0	759	15	6	92	196	7.5
14211550	03-14-93	10.5	757	42	24	81	130	10.7
453547122463000	04-18-92	12.0	--	45100	32	90	72	--
	10-26-92	14.5	770	9720	4	100	90	9.0

Table 7. Ancillary data from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992-93—Continued

STATION NUMBER	DATE	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	CALCIUM, DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	HARD-NESS TOTAL (MG/L AS CACO3)
440313123091100	04-16-92	--	7.3	7.7	4.0	--	--	--
	10-16-92	112	7.6	3.7	1.0	33	12	130
	10-29-92	--	7.1	5.7	0.2	2.8	1.0	11
443207123145500	08-24-93	106	7.6	1.2	0.3	5.0	1.9	20
443138123120901	08-24-93	80	7.4	1.9	0.7	13	6.0	57
451309123041501	09-07-93	84	7.6	2.6	0.3	11	3.9	44
451320123041100	09-07-93	97	9.4	3.0	3.1	--	--	--
14201300	06-01-93	78	7.1	6.5	1.1	29	9.6	110
	07-27-93	74	7.4	4.3	0.7	37	12	140
14202000	04-27-93	91	6.9	2.3	1.2	6.0	2.1	24
453115122535500	03-31-93	89	7.4	4.2	1.2	22	7.6	86
14206950	03-01-93	--	--	4.1	5.8	13	4.2	50
	07-22-93	78	7.4	5.5	--	22	7.0	84
14211550	03-14-93	96	7.7	2.0	1.8	11	4.9	48
453547122463000	04-18-92	--	7.3	2.5	1.6	5.9	2.0	23
	10-26-92	87	7.1	2.0	1.7	6.9	2.4	27

Table 8. Ancillary data from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

STATION NUMBER	STATION NAME	DATE	TIME
433548123040600	COAST FORK WILLAMETTE R BL BIG RIVER NR LONDON, OR	05-20-94	1040
440045122585600	COAST FORK WILLAM AT SEAVY LOOP RD NR EUGENE, OR	05-19-94	1020
440402123063900	URBAN OUTFALL AT POLK ST. PARK AT EUGENE, OR	06-13-94	1210
441310122095801	MACK CREEK NEAR BLUE RIVER, OR	05-27-94	1030
440707123041300	MCKENZIE RIVER NR EUGENE, OR	05-19-94	1450
442223123153703	LONG TOM R AT BUNDY BRIDGE NR MONROE, OR	05-19-94	0950
	LONG TOM R AT BUNDY BRIDGE NR MONROE, OR	11-01-94	1720
442413123122500	LAKE CAMOUS CR AT PINE GROVE DR NR HARRISBURG, OR	05-19-94	1720
443138123120901	MUDDY CREEK NEAR PEORIA, OR	05-26-94	1730
	MUDDY CREEK NEAR PEORIA, OR	06-03-94	0930
	MUDDY CREEK NEAR PEORIA, OR	06-20-94	1050
	MUDDY CREEK NEAR PEORIA, OR	11-02-94	1010
	MUDDY CREEK NEAR PEORIA, OR	11-06-94	1200
	MUDDY CREEK NEAR PEORIA, OR	11-09-94	1430
443045123273000	ROCK CREEK ABOVE GRIFFITH CREEK NR PHILOMATH, OR	05-18-94	1820
443321123155201	MARYS RIVER AT CORVALLIS, OR	05-18-94	1350
14173500	CALAPOOIA RIVER AT ALBANY, OR	05-26-94	1220
	CALAPOOIA RIVER AT ALBANY, OR	11-01-94	1230
444349123094000	LUCKIAMUTE R AT BUENA VISTA RD NR BUENA VISTA, OR	05-16-94	1720
444123122562200	THOMAS CREEK AT KELLY RD NR JEFFERSON, OR	05-16-94	1900
14189000	SANTIAM RIVER AT JEFFERSON, OR	05-17-94	1620

Table 8. Ancillary data from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SPE-CIFIC CON-DUCT-ANCE (US/CM)	OXYGEN, DIS-SOLVED (MG/L)
433548123040600	05-20-94	10.0	738	21	5	84	60	10.6
440045122585600	05-19-94	14.5	751	276	6	90	65	9.4
440402123063900	06-13-94	--	750	1.5	4	76	193	--
441310122095801	05-27-94	8.0	699	4.7	<1	--	24	10.9
440707123041300	05-19-94	12.0	756	1580	2	70	62	11.3
442223123153703	05-19-94	17.5	758	110	24	91	105	10.4
	11-01-94	12.0	756	1780	76	91	84	10.5
442413123122500	05-19-94	16.5	756	7.7	25	96	153	7.3
443138123120901	05-26-94	19.0	759	21	8	90	242	9.2
	06-03-94	16.0	758	29	9	99	251	7.9
	06-20-94	18.5	760	38	--	--	184	8.2
	11-02-94	10.0	754	899	158	98	109	8.5
	11-06-94	8.0	754	524	33	99	129	9.4
	11-09-94	8.5	746	230	20	94	140	10.1
443045123273000	05-18-94	13.0	750	11	3	85	107	9.8
443321123155201	05-18-94	15.0	758	159	8	88	94	--
14173500	05-26-94	19.5	762	152	13	83	164	9.6
	11-01-94	10.5	756	2750	307	86	73	9.2
444349123094000	05-16-94	13.5	754	236	7	96	91	8.9
444123122562200	05-16-94	15.0	754	204	5	91	43	10.4
14189000	05-17-94	12.5	756	3050	5	73	44	10.9

Table 8. Ancillary data from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PEND (MG/L AS C)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	HARD-NESS TOTAL (MG/L AS CACO3)
433548123040600	05-20-94	97	7.6	3.1	0.9	7.5	1.7	26
440045122585600	05-19-94	93	7.4	2.1	0.4	7.2	1.8	25
440402123063900	06-13-94	--	7.2	4.4	0.9	18	6.8	73
441310122095801	05-27-94	100	6.0	0.6	0.1	--	--	--
440707123041300	05-19-94	106	7.8	0.8	0.4	--	--	--
442223123153703	05-19-94	109	7.5	2.5	0.6	--	--	--
	11-01-94	98	7.2	4.1	3.3	--	--	--
442413123122500	05-19-94	75	7.2	2.8	0.7	--	--	--
443138123120901	05-26-94	99	7.6	2.8	0.4	--	--	--
	06-03-94	80	7.4	3.1	0.3	--	--	--
	06-20-94	88	7.5	2.5	1.6	14	7.0	64
	11-02-94	76	6.9	6.1	1.4	--	--	--
	11-06-94	80	6.8	7.3	1.1	--	--	--
	11-09-94	88	7.0	8.2	0.8	--	--	--
443045123273000	05-18-94	95	8.0	0.8	0.2	--	--	--
443321123155201	05-18-94	--	7.6	1.9	0.4	8.5	3.3	35
14173500	05-26-94	105	7.9	1.4	0.5	--	--	--
	11-01-94	83	6.9	4.2	4.7	--	--	--
444349123094000	05-16-94	87	7.1	1.9	0.3	--	--	--
444123122562200	05-16-94	105	7.4	1.3	0.4	--	--	--
14189000	05-17-94	102	7.4	1.3	0.4	--	--	--

Table 8. Ancillary data from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	STATION NAME	DATE	TIME
445547123065400	RICKREAL CREEK NR MOUTH NR SALEM, OR	05-26-94	1540
14190970	PRINGLE C AT BUSH PARK AT SALEM, OR	11-23-94	1200
	PRINGLE C AT BUSH PARK AT SALEM, OR	11-30-94	1530
	PRINGLE C AT BUSH PARK AT SALEM, OR	11-30-94	1710
445037122573800	MILL CREEK AT DELANEY ROAD NR TURNER, OR	06-14-94	1140
	MILL CREEK AT DELANEY ROAD NR TURNER, OR	10-31-94	1410
	MILL CREEK AT DELANEY ROAD NR TURNER, OR	11-04-94	1120
	MILL CREEK AT DELANEY ROAD NR TURNER, OR	11-04-94	1420
14194150	SOUTH YAMHILL RIVER AT MCMINNVILLE, OR	05-17-94	1720
	SOUTH YAMHILL RIVER AT MCMINNVILLE, OR	11-02-94	1210
451355123093600	NORTH YAMHILL RIVER AT HWY. 99E NR MCMINNVILLE, OR	05-17-94	1220
451602122564400	WILLAMETTE RIVER NR NEWBERG, OR	05-31-94	1400
451502122524700	CHAMPOEG CREEK BELOW MISSION CR NR BUTTEVILLE, OR	05-26-94	1030
	CHAMPOEG CREEK BELOW MISSION CR NR BUTTEVILLE, OR	10-31-94	1300
14201300	ZOLLNER CREEK NEAR MT ANGEL, OR	05-25-94	1450
	ZOLLNER CREEK NEAR MT ANGEL, OR	06-13-94	1120
	ZOLLNER CREEK NEAR MT ANGEL, OR	10-28-94	1320
	ZOLLNER CREEK NEAR MT ANGEL, OR	11-28-94	1400
14202000	PUDDING RIVER AT AURORA, OREG.	04-12-94	1110
	PUDDING RIVER AT AURORA, OREG.	05-25-94	1100
	PUDDING RIVER AT AURORA, OREG.	06-15-94	1145
	PUDDING RIVER AT AURORA, OREG.	10-28-94	1710
	PUDDING RIVER AT AURORA, OREG.	10-29-94	1230
	PUDDING RIVER AT AURORA, OREG.	11-09-94	1300
	PUDDING RIVER AT AURORA, OREG.	11-29-94	1110
451603122423301	MOLALLA R AT KNIGHTS BRIDGE NR CANBY, OR	05-25-94	1020
14206200	DAIRY CREEK AT RTE 8 NEAR HILLSBORO, OR	05-27-94	1640
	DAIRY CREEK AT RTE 8 NEAR HILLSBORO, OR	12-01-94	1140

Table 8. Ancillary data from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SPE-CIFIC CON-DUCT-ANCE (US/CM)	OXYGEN, DIS-SOLVED (MG/L)
445547123065400	05-26-94	17.5	760	26	3	--	168	9.5
14190970	11-23-94	8.5	--	49	10	100	80	11.2
	11-30-94	10.5	752	500	164	89	37	10.3
	11-30-94	10.5	753	650	266	86	40	10
445037122573800	06-14-94	12.5	761	187	20	43	45	11.1
	10-31-94	11.5	--	169	35	95	130	9.3
	11-04-94	9.5	--	790	34	75	112	10.1
	11-04-94	9.5	--	875	20	91	109	10.0
14194150	05-17-94	15.0	758	700	11	95	104	9.6
	11-02-94	9.5	755	4840	60	87	63	9.7
451355123093600	05-17-94	13.0	759	124	8	93	119	10.1
451602122564400	05-31-94	17.0	--	7260	5	--	90	9.5
451502122524700	05-26-94	16.0	761	8.6	7	--	300	8.4
	10-31-94	--	751	32	31	95	251	--
14201300	05-25-94	17.5	761	0.32	6	98	386	7.2
	06-13-94	16.5	757	2.5	7	98	407	7.0
	10-28-94	12.5	764	82	72	98	433	5.8
	11-28-94	8.5	767	41	11	100	389	10.3
14202000	04-12-94	10.0	766	2450	39	73	63	9.8
	05-25-94	18.5	764	300	<1	100	95	7.7
	06-15-94	15.0	763	482	9	94	77	9.4
	10-28-94	12.0	764	3650	162	89	100	8.4
	10-29-94	11.0	--	3100	68	88	88	9.1
	11-09-94	8.0	--	2220	45	90	93	10.4
	11-29-94	6.5	762	2390	19	86	77	11.1
451603122423301	05-25-94	18.5	764	123	--	--	53	9.8
14206200	05-27-94	14.0	761	64	13	97	92	8.4
	12-01-94	8.5	755	1350	90	95	95	9.2

Table 8. Ancillary data from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	HARD-NESS TOTAL (MG/L AS CACO3)
445547123065400	05-26-94	99	7.2	1.9	0.4	--	--	--
14190970	11-23-94	--	7.1	2.1	0.6	6.4	2.8	28
	11-30-94	93	6.7	2.5	7.4	3.6	1.2	14
	11-30-94	90	6.5	2.4	8.1	3.2	1.0	12
445037122573800	06-14-94	104	7.3	1.2	0.7	--	--	--
	10-31-94	--	7.1	3.1	1.4	--	--	--
	11-04-94	--	6.7	4.3	1.4	--	--	--
	11-04-94	--	6.7	4.5	1.0	--	--	--
14194150	05-17-94	95	7.5	1.4	0.3	9.4	3.0	36
	11-02-94	86	6.9	3.9	1.4	--	--	--
451355123093600	05-17-94	96	7.6	2.1	0.3	--	--	--
451602122564400	05-31-94	--	7.5	1.7	0.4	7.0	2.4	27
451502122524700	05-26-94	85	7.8	4.0	0.6	--	--	--
	10-31-94	--	--	7.8	2.0	--	--	--
14201300	05-25-94	75	7.4	3.5	0.4	--	--	--
	06-13-94	72	7.4	4.2	0.6	37	12	140
	10-28-94	54	6.7	7.8	--	38	12	140
	11-28-94	87	7.1	3.3	0.7	35	12	140
14202000	04-12-94	87	7.0	1.6	1.5	5.5	2.0	22
	05-25-94	82	7.3	1.7	0.4	--	--	--
	06-15-94	93	7.3	1.6	0.6	6.2	2.5	26
	10-28-94	78	6.7	5.5	1.6	8.0	2.7	31
	10-29-94	--	6.8	5.5	2.4	--	--	--
	11-09-94	--	6.8	3.4	1.2	--	--	--
	11-29-94	91	7.0	2.0	0.6	7.1	2.6	28
451603122423301	05-25-94	104	7.5	1.1	0.3	--	--	--
14206200	05-27-94	82	7.2	5.7	0.4	--	--	--
	12-01-94	80	6.6	4.1	3.1	7.6	2.8	31

Table 8. Ancillary data from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	STATION NAME	DATE	TIME
14206298	BRONSON CREEK AT 185TH AVE NEAR ALOHA, OR	05-27-94	1100
	BRONSON CREEK AT 185TH AVE NEAR ALOHA, OR	11-23-94	1030
14206950	FANNO CREEK AT DURHAM, OR	05-24-94	1420
	FANNO CREEK AT DURHAM, OR	06-16-94	1040
	FANNO CREEK AT DURHAM, OR	10-27-94	1620
	FANNO CREEK AT DURHAM, OR	11-30-94	1010
14207500	TUALATIN RIVER AT WEST LINN,OREG.	05-25-94	1540
	TUALATIN RIVER AT WEST LINN,OREG.	06-17-94	0900
	TUALATIN RIVER AT WEST LINN,OREG.	10-28-94	1610
	TUALATIN RIVER AT WEST LINN,OREG.	11-04-94	0857
	TUALATIN RIVER AT WEST LINN,OREG.	12-05-94	0910
452823122240900	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	05-24-94	1440
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	10-27-94	1640
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	10-28-94	1135
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	11-01-94	1100
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	11-03-94	1330
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	11-23-94	1410
453043122402200	COMMERCIAL/RESIDENTIAL RUNOFF AT HARBOR WAY, PORT, OR	06-17-94	2140
	COMMERCIAL/RESIDENTIAL RUNOFF AT HARBOR WAY, PORT, OR	06-17-94	2150
14211720	WILLAMETTE RIVER AT PORTLAND,OREG.	05-10-94	0939
	WILLAMETTE RIVER AT PORTLAND,OREG.	06-14-94	0949
	WILLAMETTE RIVER AT PORTLAND,OREG.	10-25-94	1300
	WILLAMETTE RIVER AT PORTLAND,OREG.	10-29-94	1230
	WILLAMETTE RIVER AT PORTLAND,OREG.	11-03-94	0956
	WILLAMETTE RIVER AT PORTLAND,OREG.	12-02-94	1040
453154122394200	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	05-31-94	1800
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-08-94	1800
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-08-94	1950
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-30-94	0840
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-30-94	1020
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	12-02-94	1020
14211805	WILLAMETTE R AB ST JOHNS BR AT PORTLAND,OREG.	05-23-94	0950

Table 8. Ancillary data from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SPE-CIFIC CON-DUCT-ANCE (US/CM)	OXYGEN, DIS-SOLVED (MG/L)
14206298	05-27-94	20.0	762	0.51	7	71	237	6.9
	11-23-94	5.0	760	6.2	18	100	168	11.3
14206950	05-24-94	18.5	759	7.6	8	100	235	10.4
	06-16-94	15.0	765	9.1	7	92	194	8.2
	10-27-94	13.0	755	946	770	93	67	7.6
	11-30-94	9.5	757	179	166	95	122	10.4
14207500	05-25-94	19.0	761	233	12	--	213	10.5
	06-17-94	17.5	766	230	9	--	254	9.7
	10-28-94	12.5	--	1640	48	95	163	7.9
	11-04-94	9.0	749	2020	31	96	112	8.9
	12-05-94	6.0	758	4470	51	97	82	10.0
452823122240900	05-24-94	17.5	752	1.8	5	96	102	9.5
	10-27-94	12.5	754	246	266	92	108	9.8
	10-28-94	12.0	762	68	48	96	116	10.4
	11-01-94	10.0	--	283	91	95	95	9.9
	11-03-94	9.0	755	67	14	94	96	10.7
	11-23-94	7.0	755	50	18	100	85	11.8
453043122402200	06-17-94	18.0	761	3.0	42	--	195	9.3
	06-17-94	18.0	761	3.0	--	--	195	9.3
14211720	05-10-94	16.5	766	13000	6	E93	90	9.8
	06-14-94	17.5	764	10800	10	94	79	8.8
	10-25-94	13.0	757	9740	7	100	88	9.6
	10-29-94	12.0	765	47300	30	100	79	11.4
	11-03-94	9.5	766	81800	81	96	59	12.6
	12-02-94	8.0	758	108000	120	88	57	13.5
453154122394200	05-31-94	17.0	763	0.20	97	--	227	8.4
	11-08-94	9.0	750	--	127	96	89	10.7
	11-08-94	9.0	750	--	59	97	99	10.3
	11-30-94	11.0	758	--	233	96	76	10.3
	11-30-94	11.5	758	--	215	93	90	10.0
	12-02-94	12.0	--	--	17	78	274	--
14211805	05-23-94	16.5	768	17800	14	97	120	9.3

Table 8. Ancillary data from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	CALCIUM, DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	HARD-NESS TOTAL (MG/L AS CACO3)
14206298	05-27-94	76	7.7	2.1	0.4	21	8.5	87
	11-23-94	88	7.2	5.1	1.1	14	5.0	56
14206950	05-24-94	112	7.7	3.6	0.6	--	--	--
	06-16-94	80	7.3	4.4	0.3	21	7.4	83
	10-27-94	72	6.7	6.5	--	5.3	1.8	21
	11-30-94	92	7.3	4.4	4.6	11	3.5	42
14207500	05-25-94	114	7.9	2.8	1.7	17	4.8	62
	06-17-94	101	7.6	3.3	1.9	20	5.2	71
	10-28-94	--	6.9	5.1	--	14	3.7	50
	11-04-94	79	6.8	--	--	9.7	2.9	36
	12-05-94	80	7.0	3.4	2.0	7.2	2.4	28
452823122240900	05-24-94	100	7.4	3.1	0.5	--	--	--
	10-27-94	93	6.6	6.6	5.7	--	--	--
	10-28-94	96	6.8	3.9	1.8	--	--	--
	11-01-94	--	6.5	3.4	2.2	--	--	--
	11-03-94	94	6.8	2.2	0.5	--	--	--
	11-23-94	99	7.1	2.9	0.7	--	--	--
453043122402200	06-17-94	98	7.3	26	8.4	12	3.4	44
	06-17-94	98	7.3	4.8	0.3	--	--	--
14211720	05-10-94	100	7.2	1.7	0.5	7.0	2.4	27
	06-14-94	92	7.2	1.6	0.7	6.2	2.1	24
	10-25-94	93	7.2	1.8	--	6.8	2.1	26
	10-29-94	106	7.2	3.4	1.1	6.5	2.1	25
	11-03-94	109	7.0	3.8	2.4	5.2	1.6	20
	12-02-94	115	7.0	2.5	3.3	5.0	1.6	19
453154122394200	05-31-94	87	7.7	28	6.3	29	2.9	84
	11-08-94	93	7.2	6.9	7.4	12	1.0	34
	11-08-94	91	7.3	7.8	3.9	15	1.6	44
	11-30-94	94	7.8	4.8	16	12	0.70	33
	11-30-94	92	7.9	5.0	13	15	1.0	42
	12-02-94	--	8.0	3.4	1.1	32	7.8	110
14211805	05-23-94	95	7.2	1.5	0.6	8.1	2.9	32

Table 9. Concentrations of nutrients in whole and filtered water from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1993

[USGS laboratory schedule 2702]

STATION NUMBER	STATION NAME	DATE	TIME	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
443207123145500	WILLAMETTE RIVER NEAR CORVALLIS, OR	08-24-93	1615	0.020
443138123120901	MUDDY CREEK NEAR PEORIA, OR	08-24-93	1300	0.030
451309123041501	PALMER C AT DAYTON, OR	09-07-93	1045	0.040
451320123041100	YAMHILL RIVER AT DAYTON, OR	09-07-93	1420	0.040
14201300	ZOLLNER CREEK NEAR MT ANGEL, OR	07-27-93	1015	0.040
14206950	FANNO CREEK AT DURHAM, OR	07-22-93	1000	0.050

STATION NUMBER	DATE	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)
443207123145500	08-24-93	<0.010	<0.20	<0.20	1.10	0.110	0.090	0.070
443138123120901	08-24-93	<0.010	<0.20	<0.20	0.160	0.030	0.020	0.040
451309123041501	09-07-93	<0.010	0.20	0.20	0.260	0.160	0.160	0.130
451320123041100	09-07-93	0.020	0.30	0.30	0.260	0.080	0.060	0.040
14201300	07-27-93	0.030	0.80	0.60	6.90	0.170	0.190	0.180
14206950	07-22-93	0.010	0.30	0.60	0.470	0.120	0.100	0.080

Table 10. Concentrations of nutrients in whole and filtered water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

USGS laboratory schedule 2702]

STATION NUMBER	STATION NAME	DATE	TIME	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
433548123040600	COAST FORK WILLAMETTE R BL BIG RIVER NR LONDON, OR	05-20-94	1040	0.030
440045122585600	COAST FORK WILLAM AT SEAVY LOOP RD NR EUGENE, OR	05-19-94	1020	0.040
440402123063900	URBAN OUTFALL AT POLK ST. PARK AT EUGENE, OR	06-13-94	1210	0.020
441310122095801	MACK CREEK NEAR BLUE RIVER, OR	05-27-94	1030	0.020
440707123041300	MCKENZIE RIVER NR EUGENE, OR	05-19-94	1450	0.020
442223123153703	LONG TOM R AT BUNDY BRIDGE NR MONROE, OR	05-19-94	0950	0.020
	LONG TOM R AT BUNDY BRIDGE NR MONROE, OR	11-01-94	1720	0.040
442413123122500	LAKE CAMOUS CR AT PINE GROVE DR NR HARRISBURG, OR	05-19-94	1720	0.050
443138123120901	MUDDY CREEK NEAR PEORIA, OR	05-26-94	1730	0.030
	MUDDY CREEK NEAR PEORIA, OR	06-03-94	0930	0.030
	MUDDY CREEK NEAR PEORIA, OR	06-20-94	1050	0.030
	MUDDY CREEK NEAR PEORIA, OR	11-02-94	1010	0.050
	MUDDY CREEK NEAR PEORIA, OR	11-06-94	1200	0.080
	MUDDY CREEK NEAR PEORIA, OR	11-09-94	1430	--
443045123273000	ROCK CREEK ABOVE GRIFFITH CREEK NR PHILOMATH, OR	05-18-94	1820	0.040
443321123155201	MARYS RIVER AT CORVALLIS, OR	05-18-94	1350	<0.010
14173500	CALAPOOIA RIVER AT ALBANY, OR	05-26-94	1220	0.020
	CALAPOOIA RIVER AT ALBANY, OR	11-01-94	1230	0.080
444349123094000	LUCKIAMUTE R AT BUENA VISTA RD NR BUENA VISTA, OR	05-16-94	1720	<0.010
444123122562200	THOMAS CREEK AT KELLY RD NR JEFFERSON, OR	05-16-94	1900	<0.010
14189000	SANTIAM RIVER AT JEFFERSON, OR	05-17-94	1620	<0.010

Table 10. Concentrations of nutrients in whole and filtered water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)
433548123040600	05-20-94	<0.010	<0.20	<0.20	0.088	0.020	<0.010	0.010
440045122585600	05-19-94	0.010	<0.20	0.40	0.130	0.140	0.020	0.010
440402123063900	06-13-94	0.010	0.30	0.50	1.20	0.140	0.110	0.090
441310122095801	05-27-94	<0.010	<0.20	<0.20	0.051	<0.010	<0.010	0.010
440707123041300	05-19-94	<0.010	<0.20	<0.20	<0.050	0.010	0.020	0.030
442223123153703	05-19-94	<0.010	<0.20	0.30	0.880	0.030	0.020	0.010
	11-01-94	<0.010	0.20	0.90	0.640	0.110	0.040	0.030
442413123122500	05-19-94	0.030	0.30	0.40	0.690	0.120	0.080	0.080
443138123120901	05-26-94	<0.010	0.20	0.30	1.20	0.090	0.080	0.090
	06-03-94	0.010	<0.20	0.30	1.60	0.080	0.070	0.070
	06-20-94	<0.010	<0.20	0.30	1.20	0.110	0.100	0.090
	11-02-94	0.020	0.40	1.3	2.50	0.230	0.070	0.080
	11-06-94	0.040	0.60	0.80	4.10	0.140	0.080	0.070
	11-09-94	--	--	--	3.20	0.080	--	--
443045123273000	05-18-94	<0.010	<0.20	<0.20	<0.050	<0.010	<0.010	<0.010
443321123155201	05-18-94	<0.010	<0.20	<0.20	0.120	0.020	0.020	0.020
14173500	05-26-94	<0.010	<0.20	<0.20	0.710	0.020	<0.010	0.020
	11-01-94	0.020	0.30	0.80	1.70	0.260	0.080	0.090
444349123094000	05-16-94	<0.010	<0.20	<0.20	0.200	0.010	<0.010	0.010
444123122562200	05-16-94	<0.010	<0.20	<0.20	0.120	<0.010	<0.010	<0.010
14189000	05-17-94	<0.010	<0.20	0.30	0.150	0.020	<0.010	<0.010

Table 10. Concentrations of nutrients in whole and filtered water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	STATION NAME	DATE	TIME	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
445547123065400	RICKREAL CREEK NR MOUTH NR SALEM, OR	05-26-94	1540	0.020
14190970	PRINGLE C AT BUSH PARK AT SALEM, OR	11-23-94	1200	--
	PRINGLE C AT BUSH PARK AT SALEM, OR	11-30-94	1530	--
	PRINGLE C AT BUSH PARK AT SALEM, OR	11-30-94	1710	--
445037122573800	MILL CREEK AT DELANEY ROAD NR TURNER, OR	06-14-94	1140	0.030
	MILL CREEK AT DELANEY ROAD NR TURNER, OR	10-31-94	1410	--
	MILL CREEK AT DELANEY ROAD NR TURNER, OR	11-04-94	1120	--
	MILL CREEK AT DELANEY ROAD NR TURNER, OR	11-04-94	1420	--
14194150	SOUTH YAMHILL RIVER AT MCMINNVILLE, OR	05-17-94	1720	<0.010
	SOUTH YAMHILL RIVER AT MCMINNVILLE, OR	11-02-94	1210	--
451355123093600	NORTH YAMHILL RIVER AT HWY. 99E NR MCMINNVILLE, OR	05-17-94	1220	<0.010
451602122564400	WILLAMETTE RIVER NR NEWBERG, OR	05-31-94	1400	0.060
451502122524700	CHAMPOEG CREEK BELOW MISSION CR NR BUTTEVILLE, OR	05-26-94	1030	0.030
	CHAMPOEG CREEK BELOW MISSION CR NR BUTTEVILLE, OR	10-31-94	1300	--
14201300	ZOLLNER CREEK NEAR MT ANGEL, OR	05-25-94	1450	0.070
	ZOLLNER CREEK NEAR MT ANGEL, OR	06-13-94	1120	0.050
	ZOLLNER CREEK NEAR MT ANGEL, OR	10-28-94	1320	0.270
	ZOLLNER CREEK NEAR MT ANGEL, OR	11-28-94	1400	0.360
14202000	PUDDING RIVER AT AURORA, OREG.	04-12-94	1110	0.020
	PUDDING RIVER AT AURORA, OREG.	05-25-94	1100	0.060
	PUDDING RIVER AT AURORA, OREG.	06-15-94	1145	0.060
	PUDDING RIVER AT AURORA, OREG.	10-28-94	1710	0.050
	PUDDING RIVER AT AURORA, OREG.	10-29-94	1230	0.040
	PUDDING RIVER AT AURORA, OREG.	11-09-94	1300	--
	PUDDING RIVER AT AURORA, OREG.	11-29-94	1110	0.040
451603122423301	MOLALLA R AT KNIGHTS BRIDGE NR CANBY, OR	05-25-94	1020	0.050
14206200	DAIRY CREEK AT RTE 8 NEAR HILLSBORO, OR	05-27-94	1640	0.030
	DAIRY CREEK AT RTE 8 NEAR HILLSBORO, OR	12-01-94	1140	--

Table 10. Concentrations of nutrients in whole and filtered water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)
445547123065400	05-26-94	0.010	0.20	0.20	1.70	0.100	0.090	0.090
14190970	11-23-94	--	--	--	1.80	0.030	--	--
	11-30-94	--	--	--	0.810	0.070	--	--
	11-30-94	--	--	--	0.710	0.320	--	--
445037122573800	06-14-94	<0.010	<0.20	<0.20	0.460	0.020	0.020	<0.010
	10-31-94	--	--	--	6.70	0.110	--	--
	11-04-94	--	--	--	5.70	0.140	--	--
	11-04-94	--	--	--	5.50	0.160	--	--
14194150	05-17-94	<0.010	<0.20	<0.20	0.220	0.010	<0.010	<0.010
	11-02-94	--	--	--	1.00	0.040	--	--
451355123093600	05-17-94	<0.010	<0.20	<0.20	0.190	0.020	<0.010	0.010
451602122564400	05-31-94	0.020	0.20	<0.20	0.410	0.060	0.050	0.050
451502122524700	05-26-94	0.010	0.40	0.50	1.40	0.260	0.240	0.230
	10-31-94	--	--	--	1.90	--	--	--
14201300	05-25-94	0.050	0.40	0.50	9.00	0.220	0.220	0.220
	06-13-94	0.030	0.60	0.70	6.60	0.260	0.240	0.230
	10-28-94	0.220	1.3	2.0	22.0	0.630	0.350	0.350
	11-28-94	0.120	0.80	0.80	19.0	0.170	0.140	0.150
14202000	04-12-94	<0.010	<0.20	0.20	1.60	0.080	0.030	0.020
	05-25-94	0.030	<0.20	0.20	1.10	0.070	0.050	0.060
	06-15-94	0.010	<0.20	<0.20	0.720	0.070	0.060	0.070
	10-28-94	0.020	0.40	1.1	4.10	0.380	0.100	0.070
	10-29-94	0.030	0.30	0.70	3.50	0.220	0.090	0.080
	11-09-94	--	--	--	3.10	0.080	--	--
	11-29-94	0.020	0.20	0.20	2.80	0.070	0.040	0.040
451603122423301	05-25-94	0.030	<0.20	<0.20	0.260	0.010	0.020	<0.010
14206200	05-27-94	<0.010	<0.20	0.30	0.510	0.060	0.040	0.040
	12-01-94	--	--	--	3.80	0.120	--	--

Table 10. Concentrations of nutrients in whole and filtered water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	STATION NAME	DATE	TIME	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
14206298	BRONSON CREEK AT 185TH AVE NEAR ALOHA, OR	05-27-94	1100	0.030
	BRONSON CREEK AT 185TH AVE NEAR ALOHA, OR	11-23-94	1030	--
14206950	FANNO CREEK AT DURHAM, OR	05-24-94	1420	0.080
	FANNO CREEK AT DURHAM, OR	06-16-94	1040	0.090
	FANNO CREEK AT DURHAM, OR	10-27-94	1620	0.020
	FANNO CREEK AT DURHAM, OR	11-30-94	1010	0.030
14207500	TUALATIN RIVER AT WEST LINN,OREG.	05-25-94	1540	0.040
	TUALATIN RIVER AT WEST LINN,OREG.	06-17-94	0900	0.010
	TUALATIN RIVER AT WEST LINN,OREG.	10-28-94	1610	0.140
	TUALATIN RIVER AT WEST LINN,OREG.	11-04-94	0857	0.080
	TUALATIN RIVER AT WEST LINN,OREG.	12-05-94	0910	0.240
452823122240900	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	05-24-94	1440	0.050
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	10-27-94	1640	--
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	10-28-94	1135	--
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	11-01-94	1100	0.050
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	11-03-94	1330	--
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	11-23-94	1410	--
453043122402200	COMMERCIAL/RESIDENTIAL RUNOFF AT HARBOR WAY, PORT, OR	06-17-94	2140	0.440
	COMMERCIAL/RESIDENTIAL RUNOFF AT HARBOR WAY, PORT, OR	06-17-94	2150	--
14211720	WILLAMETTE RIVER AT PORTLAND,OREG.	05-10-94	0939	0.050
	WILLAMETTE RIVER AT PORTLAND,OREG.	06-14-94	0949	0.120
	WILLAMETTE RIVER AT PORTLAND,OREG.	10-25-94	1300	0.080
	WILLAMETTE RIVER AT PORTLAND,OREG.	10-29-94	1230	0.060
	WILLAMETTE RIVER AT PORTLAND,OREG.	11-03-94	0956	0.040
	WILLAMETTE RIVER AT PORTLAND,OREG.	12-02-94	1040	0.040
453154122394200	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	05-31-94	1800	1.50
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-08-94	1800	--
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-08-94	1950	--
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-30-94	0840	--
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-30-94	1020	--
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	12-02-94	1020	--
14211805	WILLAMETTE R AB ST JOHNS BR AT PORTLAND,OREG.	05-23-94	0950	0.050

Table 10. Concentrations of nutrients in whole and filtered water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)
14206298	05-27-94	<0.010	0.40	0.50	<0.050	0.080	0.030	0.040
	11-23-94	--	--	--	1.20	0.150	--	--
14206950	05-24-94	0.020	<0.20	0.30	0.480	0.100	0.040	0.040
	06-16-94	<0.010	0.30	0.40	0.420	0.120	0.070	0.060
	10-27-94	0.020	0.30	0.80	0.790	0.210	0.130	0.110
	11-30-94	0.010	0.20	0.40	0.560	0.160	0.050	0.060
14207500	05-25-94	0.030	0.20	0.50	1.90	0.060	0.030	0.020
	06-17-94	0.010	0.30	0.30	1.40	0.040	<0.010	<0.010
	10-28-94	0.020	0.40	0.70	1.20	0.200	0.090	0.070
	11-04-94	0.020	--	0.60	2.10	0.160	0.070	0.050
	12-05-94	0.020	0.40	0.60	2.00	0.140	0.090	0.060
452823122240900	05-24-94	0.020	0.30	0.40	2.00	0.070	0.060	0.040
	10-27-94	--	--	--	--	--	--	--
	10-28-94	--	--	--	--	--	--	--
	11-01-94	<0.010	0.30	0.40	5.60	0.070	0.040	0.030
	11-03-94	--	--	--	0.440	0.040	--	--
	11-23-94	--	--	--	4.30	0.050	--	--
453043122402200	06-17-94	0.040	1.0	1.4	0.820	0.180	0.120	0.080
	06-17-94	--	--	--	--	--	--	--
14211720	05-10-94	0.010	<0.20	0.30	0.540	0.050	0.030	0.040
	06-14-94	0.010	<0.20	0.30	0.330	0.070	0.050	0.040
	10-25-94	0.010	<0.20	<0.20	0.280	0.070	0.050	0.062
	10-29-94	0.010	0.20	0.40	0.740	0.140	0.070	0.060
	11-03-94	0.010	<0.20	0.50	1.10	0.140	0.050	0.034
	12-02-94	0.010	<0.20	0.50	0.940	0.170	0.030	0.034
453154122394200	05-31-94	0.350	2.5	3.4	2.20	0.260	0.110	0.090
	11-08-94	--	--	--	0.510	0.250	--	--
	11-08-94	--	--	--	0.770	0.120	--	--
	11-30-94	--	--	--	0.270	0.060	--	--
	11-30-94	--	--	--	0.370	0.050	--	--
	12-02-94	--	--	--	3.40	0.090	--	--
14211805	05-23-94	0.020	0.30	0.20	0.530	0.060	0.070	0.070

Table 11. Concentrations of trace elements and major metals in whole water from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93

STATION NUMBER	STATION NAME	DATE	TIME	ANTI-MONY, TOTAL (UG/L AS SB)
440313123091100	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	10-16-92	1345	1.1000
	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	10-29-92	1000	2.0000
443207123145500	WILLAMETTE RIVER NEAR CORVALLIS, OR	08-24-93	1615	<1.0000
443138123120901	MUDDY CREEK NEAR PEORIA, OR	08-24-93	1300	<1.0000
451309123041501	PALMER C AT DAYTON, OR	09-07-93	1045	<1.0000
14201300	ZOLLNER CREEK NEAR MT ANGEL, OR	06-01-93	1115	1.0000
	ZOLLNER CREEK NEAR MT ANGEL, OR	07-27-93	1015	<1.0000
14202000	PUDDING RIVER AT AURORA, OREG.	04-27-93	1445	1.0000
453115122535500	BEAVERTON C AT 216TH AVE NEAR ORENCO, OR	03-31-93	1810	1.0000
14206950	FANNO CREEK AT DURHAM, OR	03-01-93	1830	3.0000
	FANNO CREEK AT DURHAM, OR	07-22-93	1000	<1.0000
14211550	JOHNSON CREEK AT MILWAUKIE,OREG.	03-14-93	1745	<1.0000
453547122463000	WILLAMETTE RIVER AT LINNTON, OR	04-18-92	0900	<1.0000
	WILLAMETTE RIVER AT LINNTON, OR	10-26-92	1000	2.0000

STATION NUMBER	DATE	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
440313123091100	10-16-92	1.2000	<10.000	50.000	0.10000	0.80000	<0.50000	2.3000	250.00
	10-29-92	4.0000	<10.000	30.000	<1.0000	16.000	2.0000	21.000	3300.0
443207123145500	08-24-93	<1.0000	<10.000	10.000	<1.0000	<0.50000	<1.0000	<0.50000	130.00
443138123120901	08-24-93	<1.0000	<10.000	20.000	<1.0000	0.60000	<0.50000	1.0000	620.00
451309123041501	09-07-93	2.0000	<10.000	12.000	<1.0000	<0.50000	<1.0000	<0.50000	360.00
14201300	06-01-93	1.0000	<10.000	60.000	<1.0000	<1.0000	<1.0000	7.0000	1800.0
	07-27-93	1.0000	<10.000	40.000	<1.0000	1.0000	3.0000	--	570.00
14202000	04-27-93	<1.0000	<10.000	20.000	<1.0000	<1.0000	<1.0000	1.0000	1500.0
453115122535500	03-31-93	2.0000	<10.000	20.000	<1.0000	<1.0000	<1.0000	4.0000	700.00
14206950	03-01-93	1.0000	<10.000	30.000	<1.0000	9.0000	4.0000	6.0000	6000.0
	07-22-93	2.0000	<10.000	30.000	<1.0000	0.70000	<0.50000	2.5000	770.00
14211550	03-14-93	<1.0000	<10.000	30.000	<1.0000	5.0000	<1.0000	4.0000	700.00
453547122463000	04-18-92	<1.0000	<10.000	10.000	<1.0000	<1.0000	1.0000	8.0000	1200.0
	10-26-92	<1.0000	<10.000	20.000	<0.10000	<0.50000	<0.50000	1.3000	220.00

Table 11. Concentrations of trace elements and major metals in whole water from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93—Continued

STATION NUMBER	DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
440313123091100	10-16-92	1.4000	16.000	<0.10000	<1.0000	<1.0000	<1.0000	11.000
	10-29-92	30.000	160.00	0.10000	8.0000	<1.0000	<1.0000	130.00
443207123145500	08-24-93	<0.50000	8.7000	<0.10000	<1.0000	<1.0000	<1.0000	<10.000
443138123120901	08-24-93	<0.50000	67.000	<0.10000	<1.0000	<1.0000	<1.0000	1.3000
451309123041501	09-07-93	0.60000	124.00	<0.10000	<1.0000	<1.0000	<1.0000	0.60000
14201300	06-01-93	2.0000	170.00	<0.10000	2.0000	<1.0000	<1.0000	20.000
	07-27-93	<0.50000	170.00	<0.10000	0.80000	<1.0000	<1.0000	13.000
14202000	04-27-93	<1.0000	50.000	<0.10000	<1.0000	<1.0000	<1.0000	<10.000
453115122535500	03-31-93	<1.0000	110.00	<0.10000	9.0000	<1.0000	<1.0000	20.000
14206950	03-01-93	16.000	420.00	<0.10000	7.0000	<1.0000	<1.0000	80.000
	07-22-93	0.50000	180.00	<0.10000	<1.0000	<1.0000	<1.0000	11.000
14211550	03-14-93	3.0000	30.000	<0.10000	6.0000	<1.0000	<1.0000	20.000
453547122463000	04-18-92	1.0000	40.000	<0.10000	1.0000	<1.0000	<1.0000	10.000
	10-26-92	<0.50000	19.000	<0.10000	3.0000	<1.0000	<1.0000	1.1000

Table 12. Concentrations of trace elements in whole water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

STATION NUMBER	STATION NAME	DATE	TIME	ARSENIC TOTAL (UG/L AS AS)
433548123040600	COAST FORK WILLAMETTE R BL BIG RIVER NR LONDON, OR	05-20-94	1040	--
440045122585600	COAST FORK WILLAM AT SEAVY LOOP RD NR EUGENE, OR	05-19-94	1020	--
443321123155201	MARYS RIVER AT CORVALLIS, OR	05-18-94	1350	--
14190970	PRINGLE C AT BUSH PARK AT SALEM, OR	11-23-94	1200	<1.0000
	PRINGLE C AT BUSH PARK AT SALEM, OR	11-30-94	1530	<1.0000
	PRINGLE C AT BUSH PARK AT SALEM, OR	11-30-94	1710	<1.0000
445037122573800	MILL CREEK AT DELANEY ROAD NR TURNER, OR	06-14-94	1140	--
14194150	SOUTH YAMHILL RIVER AT MCMINNVILLE, OR	05-17-94	1720	--
451602122564400	WILLAMETTE RIVER NR NEWBERG, OR	05-31-94	1400	--
14206200	DAIRY CREEK AT RTE 8 NEAR HILLSBORO, OR	12-01-94	1140	1.0000
14206298	BRONSON CREEK AT 185TH AVE NEAR ALOHA, OR	05-27-94	1100	--
	BRONSON CREEK AT 185TH AVE NEAR ALOHA, OR	11-23-94	1030	<1.0000
14206950	FANNO CREEK AT DURHAM, OR	10-27-94	1620	--
14207500	TUALATIN RIVER AT WEST LINN,OREG.	05-25-94	1540	--
	TUALATIN RIVER AT WEST LINN,OREG.	10-28-94	1610	--
452823122240900	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	11-03-94	1330	--
453043122402200	COMMERCIAL/RESIDENTIAL RUNOFF AT HARBOR WAY, PORT, OR	06-17-94	2140	--
14211720	WILLAMETTE RIVER AT PORTLAND,OREG.	10-29-94	1230	--
453154122394200	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	05-31-94	1800	--
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-08-94	1800	1.0000
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-08-94	1950	1.0000
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-30-94	0840	1.0000
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-30-94	1020	1.0000
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	12-02-94	1020	2.0000
14211805	WILLAMETTE R AB ST JOHNS BR AT PORTLAND,OREG.	05-23-94	0950	--

Table 12. Concentrations of trace elements in whole water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
433548123040600	05-20-94	<1.0000	<1.0000	1.0000	<1.0000	<0.10000	<1.0000	<10.000
440045122585600	05-19-94	<1.0000	<1.0000	1.0000	<1.0000	<0.10000	<1.0000	<10.000
443321123155201	05-18-94	<1.0000	1.9000	1.0000	<1.0000	--	3.0000	<10.000
14190970	11-23-94	<1.0000	<1.0000	2.0000	1.0000	--	<1.0000	<10.000
	11-30-94	<1.0000	4.8000	8.0000	21.000	--	3.0000	60.000
	11-30-94	<1.0000	6.6000	11.000	44.000	--	5.0000	90.000
445037122573800	06-14-94	<1.0000	<1.0000	<1.0000	<1.0000	--	<1.0000	<10.000
14194150	05-17-94	<1.0000	<1.0000	3.0000	<1.0000	--	1.0000	<10.000
451602122564400	05-31-94	<1.0000	<1.0000	1.0000	<1.0000	--	1.0000	<10.000
14206200	12-01-94	<1.0000	3.3000	3.0000	2.0000	--	2.0000	10.000
14206298	05-27-94	<1.0000	<1.0000	1.0000	1.0000	--	2.0000	<10.000
	11-23-94	<1.0000	2.5000	3.0000	1.0000	--	2.0000	<10.000
14206950	10-27-94	<1.0000	3.9000	4.0000	5.0000	--	3.0000	30.000
14207500	05-25-94	<1.0000	<1.0000	3.0000	<1.0000	--	2.0000	<10.000
	10-28-94	<1.0000	2.2000	5.0000	2.0000	--	2.0000	20.000
452823122240900	11-03-94	<1.0000	<1.0000	<1.0000	<1.0000	--	<1.0000	<10.000
453043122402200	06-17-94	7.0000	--	45.000	44.000	--	6.0000	290.00
14211720	10-29-94	<1.0000	1.1000	2.0000	<1.0000	--	1.0000	<10.000
453154122394200	05-31-94	1.0000	7.3000	36.000	36.000	--	12.000	200.00
	11-08-94	2.0000	8.6000	19.000	39.000	--	8.0000	210.00
	11-08-94	1.0000	5.6000	12.000	21.000	--	1.0000	150.00
	11-30-94	2.0000	14.000	21.000	67.000	--	9.0000	280.00
	11-30-94	2.0000	14.000	21.000	59.000	--	9.0000	280.00
	12-02-94	<1.0000	5.0000	9.0000	14.000	--	3.0000	70.000
14211805	05-23-94	<1.0000	<1.0000	1.0000	<1.0000	--	<1.0000	<10.000

Table 13. Concentrations of trace elements and major metals in filtered water from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93

STATION NUMBER	STATION NAME	DATE	TIME	ANTIMONY, DISSOLVED (UG/L AS SB)
440313123091100	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	10-16-92	1345	1.0000
	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	10-29-92	1000	2.0000
443207123145500	WILLAMETTE RIVER NEAR CORVALLIS, OR	08-24-93	1615	<1.0000
443138123120901	MUDDY CREEK NEAR PEORIA, OR	08-24-93	1300	<1.0000
451309123041501	PALMER C AT DAYTON, OR	09-07-93	1045	<1.0000
14201300	ZOLLNER CREEK NEAR MT ANGEL, OR	06-01-93	1115	<1.0000
	ZOLLNER CREEK NEAR MT ANGEL, OR	07-27-93	1015	<1.0000
14202000	PUDDING RIVER AT AURORA, OREG.	04-27-93	1445	<1.0000
453115122535500	BEAVERTON C AT 216TH AVE NEAR ORENCO, OR	03-31-93	1810	1.0000
14206950	FANNO CREEK AT DURHAM, OR	03-01-93	1830	1.0000
	FANNO CREEK AT DURHAM, OR	07-22-93	1000	<1.0000
14211550	JOHNSON CREEK AT MILWAUKIE,OREG.	03-14-93	1745	<1.0000
453547122463000	WILLAMETTE RIVER AT LINNTON, OR	04-18-92	0900	<1.0000
	WILLAMETTE RIVER AT LINNTON, OR	10-26-92	1000	<1.0000

Table 13. Concentrations of trace elements and major metals in filtered water from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93—Continued

STATION NUMBER	DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
440313123091100	10-16-92	1.0000	<10.000	--	<0.10000	<0.50000	<0.50000	1.0000	160.00
	10-29-92	3.0000	<10.000	20.000	<0.10000	5.4000	<0.50000	7.4000	330.00
443207123145500	08-24-93	<1.0000	<0.50000	10.000	<0.10000	<0.50000	<0.50000	<0.50000	67.000
443138123120901	08-24-93	<1.0000	<0.50000	20.000	<0.10000	<0.50000	<0.50000	0.70000	300.00
451309123041501	09-07-93	2.0000	<0.50000	14.000	<0.10000	<0.50000	<0.50000	<0.50000	200.00
14201300	06-01-93	1.0000	<10.000	50.000	0.10000	<0.50000	<0.50000	3.5000	120.00
	07-27-93	1.0000	<0.50000	40.000	<0.10000	0.70000	3.2000	--	290.00
14202000	04-27-93	<1.0000	<10.000	20.000	0.20000	1.0000	<0.50000	2.2000	100.00
453115122535500	03-31-93	<1.0000	<10.000	10.000	0.70000	2.5000	<0.50000	4.6000	340.00
14206950	03-01-93	<1.0000	<10.000	20.000	0.20000	1.8000	<0.50000	--	510.00
	07-22-93	2.0000	<0.50000	30.000	0.10000	0.60000	<0.50000	2.4000	590.00
14211550	03-14-93	<1.0000	<10.000	40.000	<0.10000	0.90000	<0.50000	1.9000	270.00
453547122463000	04-18-92	<1.0000	<10.000	<10.000	<0.10000	<0.50000	<0.50000	1.3000	370.00
	10-26-92	<1.0000	<10.000	--	<0.10000	<0.50000	<0.50000	1.1000	80.000

Table 13. Concentrations of trace elements and major metals in filtered water from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93—Continued

STATION NUMBER	DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
440313123091100	10-16-92	<0.50000	5.1000	<0.10000	<1.0000	<1.0000	<1.0000	1.4000
	10-29-92	2.2000	89.000	<0.10000	1.0000	<1.0000	<1.0000	<0.50000
443207123145500	08-24-93	<0.50000	3.9000	<0.10000	<1.0000	<1.0000	<1.0000	<0.50000
443138123120901	08-24-93	<0.50000	30.000	<0.10000	<1.0000	<1.0000	<1.0000	0.50000
451309123041501	09-07-93	0.50000	82.000	<0.10000	<1.0000	<1.0000	<1.0000	<0.50000
14201300	06-01-93	<0.50000	110.00	<0.10000	1.0000	<1.0000	<1.0000	<0.50000
	07-27-93	<0.50000	160.00	<0.10000	0.64000	<1.0000	<1.0000	12.000
14202000	04-27-93	0.70000	9.0000	<0.10000	<1.0000	<1.0000	<1.0000	<0.50000
453115122535500	03-31-93	0.70000	39.000	<0.10000	<1.0000	<1.0000	<1.0000	<0.50000
14206950	03-01-93	2.3000	54.000	<0.10000	2.0000	<1.0000	<1.0000	<0.50000
	07-22-93	<0.50000	170.00	<0.10000	<1.0000	<1.0000	<1.0000	10.000
14211550	03-14-93	0.70000	11.000	<0.10000	<1.0000	<1.0000	<1.0000	0.50000
453547122463000	04-18-92	<0.50000	3.2000	--	<1.0000	<1.0000	<1.0000	<0.50000
	10-26-92	<0.50000	6.0000	<0.10000	3.0000	<1.0000	<1.0000	<0.50000

Table 14. Concentrations of trace elements in filtered water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

STATION NUMBER	STATION NAME	DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)
440402123063900	URBAN OUTFALL AT POLK ST. PARK AT EUGENE, OR	06-13-94	1210	1.0000
14190970	PRINGLE C AT BUSH PARK AT SALEM, OR	11-23-94	1200	<1.0000
451602122564400	WILLAMETTE RIVER NR NEWBERG, OR	05-31-94	1400	<1.0000
14206298	BRONSON CREEK AT 185TH AVE NEAR ALOHA, OR	11-23-94	1030	<1.0000
14207500	TUALATIN RIVER AT WEST LINN,OREG.	11-04-94	0857	--
453043122402200	COMMERCIAL/RESIDENTIAL RUNOFF AT HARBOR WAY, PORT, OR	06-17-94	2140	1.0000
14211720	WILLAMETTE RIVER AT PORTLAND,OREG.	05-10-94	0939	--
	WILLAMETTE RIVER AT PORTLAND,OREG.	06-14-94	0949	<1.0000
	WILLAMETTE RIVER AT PORTLAND,OREG.	10-25-94	1300	<1.0000
	WILLAMETTE RIVER AT PORTLAND,OREG.	10-29-94	1230	<1.0000
	WILLAMETTE RIVER AT PORTLAND,OREG.	11-03-94	0956	<1.0000
453154122394200	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	05-31-94	1800	2.0000
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-08-94	1800	2.0000

Table 14. Concentrations of trace elements in filtered water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)
440402123063900	06-13-94	23.000	<1.0000	6.0000	<1.0000	<1.0000	<1.0000	<1.0000	13.000
14190970	11-23-94	113.00	<1.0000	28.000	<1.0000	<1.0000	<1.0000	<1.0000	1.0000
451602122564400	05-31-94	17.000	<1.0000	5.0000	<1.0000	<1.0000	<1.0000	<1.0000	2.0000
14206298	11-23-94	107.00	<1.0000	19.000	<1.0000	<1.0000	<1.0000	<1.0000	2.0000
14207500	11-04-94	340.00	--	17.000	--	--	--	<3.0000	--
453043122402200	06-17-94	49.000	<1.0000	14.000	<1.0000	<1.0000	<1.0000	<1.0000	21.000
14211720	05-10-94	<10.000	--	7.0000	--	--	--	<3.0000	--
	06-14-94	15.000	<1.0000	6.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000
	10-25-94	25.000	<1.0000	5.0000	<1.0000	<1.0000	<1.0000	<1.0000	5.0000
	10-29-94	93.000	<1.0000	8.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000
	11-03-94	160.00	<1.0000	7.0000	<1.0000	<1.0000	<1.0000	<1.0000	2.0000
453154122394200	05-31-94	220.00	4.0000	63.000	<1.0000	<1.0000	3.0000	<1.0000	16.000
	11-08-94	203.00	2.0000	52.000	<1.0000	<1.0000	2.0000	<1.0000	9.0000

Table 14. Concentrations of trace elements in filtered water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	URANIUM NATURAL DIS-SOLVED (UG/L AS U)	ZINC, DIS-SOLVED (UG/L AS ZN)
440402123063900	06-13-94	<1.0000	8.0000	10.000	1.0000	<1.0000	<1.0000	<1.0000	49.000
14190970	11-23-94	<1.0000	33.000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	6.0000
451602122564400	05-31-94	<1.0000	12.000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	2.0000
14206298	11-23-94	<1.0000	30.000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	4.0000
14207500	11-04-94	--	96.000	<10.000	5.0000	<1.0000	<1.0000	--	--
453043122402200	06-17-94	2.0000	19.000	11.000	3.0000	<1.0000	<1.0000	<1.0000	97.000
14211720	05-10-94	--	11.000	<10.000	<1.0000	<1.0000	<1.0000	--	--
	06-14-94	<1.0000	6.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	2.0000
	10-25-94	<1.0000	10.000	<1.0000	1.0000	<1.0000	<1.0000	<1.0000	<1.0000
	10-29-94	<1.0000	8.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	1.0000
	11-03-94	<1.0000	10.000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	2.0000
453154122394200	05-31-94	4.0000	27.000	7.0000	7.0000	<1.0000	<1.0000	<1.0000	54.000
	11-08-94	3.0000	28.000	2.0000	4.0000	<1.0000	<1.0000	<1.0000	54.000

Table 15. Concentrations of trace elements associated with suspended sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon 1992–93

[Al, Aluminum; Au, Gold; Hg, Mercury; Se, Selenium; Ca, Calcium; Ba, Barium; Ho, Holmium; Sn, Tin; Fe, Iron; Be, Beryllium; La, Lanthanum; Sr, Strontium; K, Potassium; Bi, Bismuth; Li, Lithium; Ta, Tantalum; Mg, Magnesium; Cd, Cadmium; Mo, Molybdenum; Th, Thorium; Na, Sodium; Ce, Cerium; Nb, Niobium; Tl, Thallium; P, Phosphorus; Co, Cobalt; Nd, Neodymium; U, Uranium; Ti, Titanium; Cr, Chromium; Ni, Nickel; V, Vanadium; Mn, Manganese; Cu, Copper; Pb, Lead; Y, Yttrium; Ag, Silver;Eu, Europium; Sb, Antimony; Yb, Ytterbium; As, Arsenic; Ga, Gallium; Sc, Scandium; Zn, Zinc; %, percent, ug/g, micrograms per gram]

Total elemental analysis of the suspended sediment as done by the Geologic Division of the U.S. Geological Survey

Station Name	Date	Time	Al (%)	Ca (%)	Fe (%)	K (%)	Mg (%)	Na (%)	P (%)	Ti (%)	Mn (ug/g)	Ag (ug/g)
Fanno Cr At Durham	03-01-93	1830	7.3	1.7	5.9	1.3	0.87	1.2	0.18	0.68	2700	0.9
A-3 Channel at Eugene	10-29-92	1000	7.0	2.7	5.4	0.69	1.3	1.4	0.35	0.53	1600	1.5
Johnson Cr at Gresham	03-14-93	1745	6.7	1.7	5.2	1.1	0.86	1.2	0.23	0.57	1000	0.4
Beaverton Cr at Orenco	03-31-93	1810	7.6	1.3	7.3	1.1	0.91	0.78	0.38	0.54	6200	--
Pudding R at Aurora	04-27-93	1445	8.4	1.6	6.4	0.96	0.83	1.0	0.16	0.84	1500	0.3
Willamette R at Linnton	04-18-92	0900	8.8	1.5	6.4	0.83	1.0	0.81	0.22	0.72	2200	0.7
Zollner Cr nr Mt Angel	06-01-93	1115	8.6	1.2	7.1	1.4	0.98	0.60	0.43	0.73	4300	0.3

STATION NAME	As (ug/g)	Au (ug/g)	Ba (ug/g)	Be (ug/g)	Bi (ug/g)	Cd (ug/g)	Ce (ug/g)	Co (ug/g)	Cr (ug/g)	Cu (ug/g)	Eu (ug/g)	Ga (ug/g)	Hg (ug/g)
Fanno Cr At Durham	8.5	< 8	670	2	< 10	0.8	66	27	80	44	< 2	17	0.12
A-3 Channel at Eugene	19.0	< 8	420	< 1	< 10	3.7	39	27	200	180	< 2	14	1.20
Johnson Cr at Gresham	5.8	< 8	560	1	< 10	1.3	47	25	91	70	< 2	14	0.18
Beaverton Cr at Beaverton	18.0	< 8	670	2	< 10	< 2	58	31	110	79	< 2	19	0.44
Pudding R at Aurora	7.3	< 8	590	2	< 10	0.3	55	27	55	34	< 2	18	0.06
Willamette R at Linnton	7.8	< 8	440	1	< 10	0.9	56	29	85	68	< 2	20	0.14
Zollner Cr nr Mt Angel	13.0	< 8	790	2	< 10	1.6	68	29	93	52	< 2	22	0.31

STATION NAME	Ho (ug/g)	La (ug/g)	Li (ug/g)	Mo (ug/g)	Nb (ug/g)	Nd (ug/g)	Ni (ug/g)	Pb (ug/g)	Sb (ug/g)	Sc (ug/g)	Se (ug/g)	Sn (ug/g)	Sr (ug/g)
Fanno Cr At Durham	< 4	33	23	1.8	14	30	33	88.4	2.3	19	0.3	< 5	240
A-3 Channel at Eugene	< 4	18	15	7.0	11	20	64	242.0	5.7	18	0.3	< 5	310
Johnson Cr at Gresham	< 4	24	19	5.4	14	23	53	115.0	1.8	15	0.4	< 5	230
Beaverton Cr at Beaverton	< 4	30	31	< 2	12	27	42	74.0	--	20	0.4	< 5	170
Pudding R at Aurora	< 4	27	23	0.9	15	27	22	16.0	0.6	24	0.3	< 5	230
Willamette R at Linnton	< 4	26	27	1.1	15	26	38	28.0	0.8	25	0.6	7	200
Zollner Cr nr Mt Angel	< 4	36	35	1.1	16	34	35	40.0	1.3	23	0.4	< 5	160

STATION NAME	Ta (ug/g)	Th (ug/g)	Tl (ug/g)	U (ug/g)	V (ug/g)	Y (ug/g)	Yb (ug/g)	Zn (ug/g)	Suspended sediment (mg/L)
Fanno Cr At Durham	< 40	8.1	0.46	2.1	170	26	2	370	203
A-3 Channel at Eugene	< 40	2.7	0.20	1.4	140	21	2	1200	90
Johnson Cr at Gresham	< 40	6.5	0.30	1.8	150	20	2	470	24
Beaverton Cr at Beaverton	< 40	8.0	--	--	170	27	2	440	10
Pudding R at Aurora	< 40	6.0	0.30	1.9	200	28	3	120	27
Willamette R at Linnton	< 40	5.7	0.20	1.8	180	27	2	200	32
Zollner Cr nr Mt Angel	< 40	10.3	0.52	2.3	180	32	3	350	33

Conversion Factors

1. Elemental conc, in % x Sus. Sediment conc, in mg/L x 10 = Elemental conc, in ug/L

2. $$\frac{\text{Elemental conc, in ug/g} \times \text{Sus. Sediment conc, in mg/L}}{1{,}000} = \text{Elemental conc, in ug/L}$$

Table 16. Concentrations of trace elements associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992

[USGS laboratory schedule 2400; WS, wet sieved; DW, dry weight; BM, bed material; UG/G, micrograms per gram]

STATION NUMBER	STATION NAME	DATE	TIME	CARBON, INORG, SED, BM WS,<63U DW, REC (PERCENT)	CARBON, ORGANIC SED, BM WS,<63U DW, REC (PERCENT)
440313123091100	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	08-25-92	1230	0.04000	8.6500
14165500	MCKENZIE RIVER NEAR COBURG,OREG.	08-25-92	1645	<0.01000	6.5100
443207123145500	WILLAMETTE RIVER NEAR CORVALLIS, OR	08-26-92	1030	<0.01000	4.7600
443819123064000	CALAPOOIA RIVER AT MOUTH AT ALBANY, OR	08-26-92	1500	0.01000	1.9900
444032123050600	MIDDLE FOURTH LAKE NEAR ALBANY, OR	09-01-92	1100	<0.01000	5.2100
444416123030800	SANTIAM RIVER NEAR JEFFERSON, OR	08-29-92	1000	0.01000	3.5400
445543123084400	RICKREALL CREEK NEAR RICKREALL, OR	08-28-92	1345	0.02000	2.5200
451320123041100	YAMHILL RIVER AT DAYTON, OR	08-27-92	1400	<0.01000	1.7500
451705122575100	WILLAMETTE RIVER AT NEWBERG, OR	09-01-92	1600	<0.01000	2.4800
452950122492900	BEAVERTON CREEK AT BEAVERTON, OR	08-23-92	1100	<0.01000	4.9400
452221122362400	CLACKAMAS RIVER AT OREGON CITY, OR	08-24-92	1130	0.02000	3.5900
452847122244500	JOHNSON CREEK AT GRESHAM, OR	08-21-92	1330	<0.01000	2.0900
453547122463000	WILLAMETTE RIVER AT LINNTON, OR	09-09-92	1130	0.01000	2.7300
453205122223701	BEAVER CREEK NEAR TROUTDALE, OR	08-22-92	0945	0.02000	2.8700

Table 16. Concentrations of trace elements associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992—Continued

STATION NUMBER	DATE	CARBON, ORG + INORG, SED, BM WS,<63U DW, REC (percent)	ALUM-INUM BOT MAT <63U WS FIELD (percent)	ANTI-MONY BOT MAT <63U WS FIELD (UG/G)	ARSENIC BOT MAT <63U WS FIELD (UG/G)	BARIUM BOT MAT <63U WS FIELD (UG/G)	BERYL-LIUM BOT MAT <63U WS FIELD (UG/G)	BISMUTH BOT MAT <180UWS FIELD (UG/G)	CADMIUM BOT MAT <63U WS FIELD (UG/G)	CALCIUM BOT MAT <63U WS FIELD (percent)
440313123091100	08-25-92	8.6900	7.3000	4.0000	12.000	360.00	1.0000	<10.000	2.2000	2.9000
14165500	08-25-92	6.5100	5.9000	1.0000	3.7000	240.00	<1.0000	<10.000	0.30000	1.5000
443207123145500	08-26-92	4.7600	6.8000	1.0000	4.1000	300.00	1.0000	<10.000	0.20000	1.9000
443819123064000	08-26-92	2.0000	8.1000	1.0000	6.8000	480.00	1.0000	<10.000	0.20000	1.8000
444032123050600	09-01-92	5.2100	7.6000	2.0000	5.7000	420.00	1.0000	<10.000	0.50000	2.0000
444416123030800	08-29-92	3.5500	8.0000	1.0000	7.5000	350.00	1.0000	<10.000	0.30000	2.0000
445543123084400	08-28-92	2.5400	7.7000	2.0000	5.2000	400.00	2.0000	<10.000	0.30000	2.1000
451320123041100	08-27-92	1.7500	7.9000	2.0000	6.6000	540.00	2.0000	<10.000	0.30000	1.6000
451705122575100	09-01-92	2.4800	8.3000	1.0000	4.6000	420.00	1.0000	<10.000	0.20000	2.3000
452950122492900	08-23-92	4.9400	6.8000	4.0000	10.000	620.00	2.0000	<10.000	3.1000	1.7000
452221122362400	08-24-92	3.6100	7.3000	1.0000	7.3000	450.00	1.0000	<10.000	0.30000	1.9000
452847122244500	08-21-92	2.0900	6.7000	0.80000	3.5000	670.00	2.0000	<10.000	0.30000	1.1000
453547122463000	09-09-92	2.7400	8.5000	1.0000	6.6000	490.00	1.0000	<10.000	0.40000	2.0000
453205122223701	08-22-92	2.8900	7.3000	1.0000	4.2000	680.00	2.0000	<10.000	0.50000	1.7000

Table 16. Concentrations of trace elements associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992—Continued

STATION NUMBER	DATE	CERIUM BOT MAT <63U WS FIELD (UG/G)	CHRO-MIUM BOT MAT <63U WS FIELD (UG/G)	COBALT BOT MAT <63U WS FIELD (UG/G)	COPPER BOT MAT <63U WS FIELD (UG/G)	EURO-PIUM BOT MAT <63U WS FIELD (UG/G)	GALLIUM BOT MAT <63U WS FIELD (UG/G)	GOLD BOT MAT <63U WS FIELD (UG/G)	HOLMIUM BOT MAT <63U WS FIELD (UG/G)	IRON BOT MAT <63U WS FIELD (percent)
440313123091100	08-25-92	31.000	140.00	30.000	140.00	<2.000	21.000	<8.0000	<4.0000	5.6000
14165500	08-25-92	23.000	70.000	19.000	43.000	<2.000	14.000	<8.0000	<4.0000	4.5000
443207123145500	08-26-92	28.000	88.000	21.000	36.000	<2.000	16.000	<8.0000	<4.0000	4.5000
443819123064000	08-26-92	43.000	90.000	26.000	44.000	<2.000	22.000	<8.0000	<4.0000	5.3000
444032123050600	09-01-92	8.0000	96.000	17.000	72.000	<2.000	18.000	<8.0000	5.0000	4.9000
444416123030800	08-29-92	36.000	94.000	36.000	52.000	<2.000	21.000	<8.0000	<4.0000	5.9000
445543123084400	08-28-92	42.000	150.00	34.000	120.00	<2.000	22.000	<8.0000	<4.0000	7.7000
451320123041100	08-27-92	49.000	120.00	31.000	73.000	<2.000	21.000	<8.0000	<4.0000	6.9000
451705122575100	09-01-92	38.000	110.00	24.000	48.000	<2.000	20.000	<8.0000	<4.0000	5.4000
452950122492900	08-23-92	56.000	110.00	29.000	150.00	<2.000	20.000	<8.0000	<4.0000	5.2000
452221122362400	08-24-92	44.000	89.000	25.000	36.000	<2.000	19.000	<8.0000	<4.0000	5.3000
452847122244500	08-21-92	62.000	74.000	19.000	23.000	<2.000	17.000	<8.0000	<4.0000	3.7000
453547122463000	09-09-92	46.000	83.000	26.000	65.000	<2.000	20.000	<8.0000	<4.0000	5.8000
453205122223701	08-22-92	53.000	73.000	23.000	38.000	<2.000	19.000	<8.0000	<4.0000	4.5000

Table 16. Concentrations of trace elements associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992—Continued

STATION NUMBER	DATE	LANTHANUM BOT MAT <63U WS FIELD (UG/G)	LEAD BOT MAT <63U WS FIELD (UG/G)	LITHIUM BOT MAT <63U WS FIELD (UG/G)	MAGNESIUM BOT MAT <63U WS FIELD (percent)	MANGANESE BOT MAT <63U WS FIELD (UG/G)	MERCURY BOT MAT <63U WS FIELD (UG/G)	MOLYBDENUM BOT MAT <63U WS FIELD (UG/G)	NEODYMIUM BOT MAT <63U WS FIELD (UG/G)	NICKEL BOT MAT <63U WS FIELD (UG/G)
440313123091100	08-25-92	18.000	140.00	20.000	1.4000	2600.0	1.2000	<2.0000	24.000	56.000
14165500	08-25-92	14.000	19.000	20.000	0.90000	1100.0	0.08000	<2.0000	16.000	26.000
443207123145500	08-26-92	17.000	13.000	20.000	1.1000	1300.0	0.07000	<2.0000	19.000	33.000
443819123064000	08-26-92	26.000	9.0000	20.000	1.0000	2300.0	<0.02000	<2.0000	27.000	25.000
444032123050600	09-01-92	25.000	28.000	20.000	0.84000	450.00	0.25000	<2.0000	29.000	63.000
444416123030800	08-29-92	20.000	14.000	20.000	1.2000	2000.0	0.05000	<2.0000	22.000	35.000
445543123084400	08-28-92	29.000	10.000	30.000	1.7000	960.00	0.05000	<2.0000	34.000	59.000
451320123041100	08-27-92	30.000	11.000	40.000	1.3000	1100.0	0.05000	<2.0000	31.000	42.000
451705122575100	09-01-92	23.000	9.0000	20.000	1.3000	920.00	0.06000	<2.0000	25.000	37.000
452950122492900	08-23-92	30.000	240.00	20.000	0.86000	1700.0	0.45000	<2.0000	28.000	41.000
452221122362400	08-24-92	27.000	23.000	20.000	1.1000	1200.0	0.08000	<2.0000	27.000	34.000
452847122244500	08-21-92	37.000	27.000	20.000	0.58000	1000.0	0.05000	<2.0000	31.000	25.000
453547122463000	09-09-92	27.000	27.000	30.000	1.2000	1200.0	0.11000	<2.0000	29.000	35.000
453205122223701	08-22-92	32.000	29.000	20.000	0.81000	1600.0	0.10000	<2.0000	29.000	30.000

Table 16. Concentrations of trace elements associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992—Continued

STATION NUMBER	DATE	NIOBIUM BOT MAT <63U WS FIELD (UG/G)	PHOS-PHORUS BOT MAT <63U WS FIELD (percent)	POTAS-SIUM BOT MAT <63U WS FIELD (percent)	SCAN-DIUM BOT MAT <63U WS FIELD (UG/G)	SELE-NIUM BOT MAT <63U WS FIELD (UG/G)	SILVER BOT MAT <63U WS FIELD (UG/G)	SODIUM BOT MAT <63U WS FIELD (percent)	STRON-TIUM BOT MAT <63U WS FIELD (UG/G)	TANTA-LUM BOT MAT <63U WS FIELD (UG/G)
440313123091100	08-25-92	8.0000	0.35000	0.68000	20.000	0.20000	1.4000	1.4000	330.00	<40.000
14165500	08-25-92	6.0000	0.21000	0.42000	16.000	0.50000	0.20000	0.76000	190.00	<40.000
443207123145500	08-26-92	7.0000	0.17000	0.56000	18.000	0.20000	0.30000	0.99000	250.00	<40.000
443819123064000	08-26-92	11.000	0.11000	0.98000	21.000	0.10000	0.20000	1.4000	270.00	<40.000
444032123050600	09-01-92	150.00	0.20000	0.97000	21.000	0.20000	0.90000	1.3000	240.00	<40.000
444416123030800	08-29-92	9.0000	0.13000	0.64000	23.000	0.20000	0.10000	1.1000	260.00	<40.000
445543123084400	08-28-92	17.000	0.15000	1.0000	30.000	0.50000	0.30000	0.93000	180.00	<40.000
451320123041100	08-27-92	16.000	0.14000	1.2000	26.000	0.80000	0.30000	1.0000	190.00	<40.000
451705122575100	09-01-92	9.0000	0.13000	0.85000	22.000	0.30000	0.50000	1.5000	320.00	<40.000
452950122492900	08-23-92	11.000	0.18000	1.3000	18.000	0.30000	1.8000	1.4000	230.00	<40.000
452221122362400	08-24-92	10.000	0.15000	0.94000	18.000	0.20000	0.10000	1.1000	230.00	<40.000
452847122244500	08-21-92	12.000	0.11000	1.4000	12.000	0.20000	0.10000	1.3000	240.00	<40.000
453547122463000	09-09-92	11.000	0.17000	0.98000	22.000	0.40000	0.60000	1.3000	280.00	<40.000
453205122223701	08-22-92	12.000	0.14000	1.3000	16.000	0.30000	0.20000	1.6000	300.00	<40.000

Table 16. Concentrations of trace elements associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992—Continued

STATION NUMBER	DATE	THORIUM BOT MAT <63U WS FIELD (UG/G)	TIN BOT MAT <63U WS FIELD (UG/G)	TITA-NIUM, BOT MAT <63U WS FIELD (PERCENT)	URANIUM BOT MAT <63U WS FIELD (UG/G)	VANA-DIUM BOT MAT <63U WS FIELD (UG/G)	YTTER-BIUM BOT MAT <63U WS FIELD (UG/G)	YTTRIUM BOT MAT <63U WS FIELD (UG/G)	ZINC BOT MAT <63U WS FIELD (UG/G)
440313123091100	08-25-92	4.0000	<10.000	0.65000	1.5000	150.00	2.0000	23.000	840.00
14165500	08-25-92	<4.0000	<10.000	0.54000	1.6000	160.00	2.0000	18.000	97.000
443207123145500	08-26-92	4.0000	<10.000	0.59000	1.1000	140.00	2.0000	19.000	100.00
443819123064000	08-26-92	6.0000	<10.000	0.95000	2.0000	170.00	2.0000	22.000	110.00
444032123050600	09-01-92	11.000	10.000	0.71000	14.000	130.00	6.0000	45.000	160.00
444416123030800	08-29-92	5.0000	<10.000	0.79000	1.5000	180.00	2.0000	24.000	110.00
445543123084400	08-28-92	7.0000	<10.000	1.4000	2.2000	290.00	3.0000	29.000	140.00
451320123041100	08-27-92	7.0000	<10.000	1.2000	2.5000	250.00	3.0000	27.000	130.00
451705122575100	09-01-92	5.0000	<10.000	0.81000	2.1000	170.00	3.0000	24.000	120.00
452950122492900	08-23-92	8.0000	<10.000	0.71000	2.7000	160.00	2.0000	35.000	670.00
452221122362400	08-24-92	8.0000	<10.000	0.80000	2.9000	170.00	2.0000	22.000	110.00
452847122244500	08-21-92	10.000	<10.000	0.65000	4.0000	100.00	2.0000	17.000	130.00
453547122463000	09-09-92	6.0000	<10.000	0.79000	2.5000	160.00	2.0000	26.000	190.00
453205122223701	08-22-92	9.0000	<10.000	0.68000	2.9000	130.00	2.0000	21.000	190.00

Table 17. Concentrations of organochlorine and organophosphorus compounds in whole water from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1993

[USGS laboratory schedule 1399]

STATION NUMBER	STATION NAME	DATE	TIME	ALDRIN, TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	p,p′-DDD, TOTAL (UG/L)
443207123145500	WILLAMETTE RIVER NEAR CORVALLIS, OR	08-24-93	1615	<0.00100	<0.10000	<0.00100
443138123120901	MUDDY CREEK NEAR PEORIA, OR	08-24-93	1300	<0.00100	<0.10000	<0.00100
451309123041501	PALMER C AT DAYTON, OR	09-07-93	1045	<0.00100	<0.10000	<0.00100
451320123041100	YAMHILL RIVER AT DAYTON, OR	09-07-93	1420	<0.00100	<0.10000	<0.00100
14201300	ZOLLNER CREEK NEAR MT ANGEL, OR	07-27-93	1015	<0.00100	<0.10000	<0.00100
14206950	FANNO CREEK AT DURHAM, OR	07-22-93	1000	<0.00100	<0.10000	<0.00100

STATION NUMBER	DATE	p,p′-DDE, TOTAL (UG/L)	p,p′-DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
443207123145500	08-24-93	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.01000	<0.01000
443138123120901	08-24-93	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.01000	<0.01000
451309123041501	09-07-93	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.01000	<0.01000
451320123041100	09-07-93	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.01000	<0.01000
14201300	07-27-93	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	0.02000	<0.01000	<0.01000
14206950	07-22-93	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.01000	<0.01000

STATION NUMBER	DATE	GROSS PCB, TOTAL (UG/L)	GROSS PCN< TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	TRI-THION TOTAL (UG/L)
443207123145500	08-24-93	<0.10000	<0.10000	<0.10000	<1.0000	<0.01000	<0.01000	0.03000	<0.01000	<0.01000	<0.01000
443138123120901	08-24-93	<0.10000	<0.10000	<0.10000	<1.0000	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000
451309123041501	09-07-93	<0.10000	<0.10000	<0.10000	<1.0000	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000
451320123041100	09-07-93	<0.10000	<0.10000	<0.10000	<1.0000	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000
14201300	07-27-93	<0.10000	<0.10000	<0.10000	<1.0000	1.0000	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000
14206950	07-22-93	<0.10000	<0.10000	<0.10000	<1.0000	0.06000	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000

Table 18. Concentrations of organochlorine compounds in whole water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

[USGS laboratory schedule 1398]

STATION NUMBER	STATION NAME	DATE	TIME	ALDRIN, TOTAL (UG/L)
433548123040600	COAST FORK WILLAMETTE R BL BIG RIVER NR LONDON, OR	05-20-94	1040	<0.00100
440045122585600	COAST FORK WILLAM AT SEAVY LOOP RD NR EUGENE, OR	05-19-94	1020	<0.00100
440402123063900	URBAN OUTFALL AT POLK ST. PARK AT EUGENE, OR	06-13-94	1210	<0.00100
441310122095801	MACK CREEK NEAR BLUE RIVER, OR	05-27-94	1030	<0.00100
440707123041300	MCKENZIE RIVER NR EUGENE, OR	05-19-94	1450	<0.00100
442223123153703	LONG TOM R AT BUNDY BRIDGE NR MONROE, OR	05-19-94	0950	<0.00100
	LONG TOM R AT BUNDY BRIDGE NR MONROE, OR	11-01-94	1720	<0.00100
442413123122500	LAKE CAMOUS CR AT PINE GROVE DR NR HARRISBURG, OR	05-19-94	1720	<0.00100
443138123120901	MUDDY CREEK NEAR PEORIA, OR	05-26-94	1730	<0.00100
	MUDDY CREEK NEAR PEORIA, OR	06-03-94	0930	<0.00100
	MUDDY CREEK NEAR PEORIA, OR	11-02-94	1010	<0.00100
	MUDDY CREEK NEAR PEORIA, OR	11-06-94	1200	<0.00100
	MUDDY CREEK NEAR PEORIA, OR	11-09-94	1430	<0.00100
443045123273000	ROCK CREEK ABOVE GRIFFITH CREEK NR PHILOMATH, OR	05-18-94	1820	<0.00100
443321123155201	MARYS RIVER AT CORVALLIS, OR	05-18-94	1350	<0.00100
14173500	CALAPOOIA RIVER AT ALBANY, OR	05-26-94	1220	<0.00100
	CALAPOOIA RIVER AT ALBANY, OR	11-01-94	1230	<0.00100
444349123094000	LUCKIAMUTE R AT BUENA VISTA RD NR BUENA VISTA, OR	05-16-94	1720	<0.00100
444123122562200	THOMAS CREEK AT KELLY RD NR JEFFERSON, OR	05-16-94	1900	<0.00100
14189000	SANTIAM RIVER AT JEFFERSON, OR	05-17-94	1620	<0.00100

Table 18. Concentrations of organochlorine compounds in whole water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	CHLORDANE, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	p,p'-DDD, TOTAL (UG/L)	p,p'-DDE, TOTAL (UG/L)	p,p'-DDT, TOTAL (UG/L)	ENDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)
433548123040600	05-20-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
440045122585600	05-19-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
440402123063900	06-13-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
441310122095801	05-27-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
440707123041300	05-19-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
442223123153703	05-19-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	11-01-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
442413123122500	05-19-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
443138123120901	05-26-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	06-03-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	11-02-94	<0.10000	0.001000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	11-06-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	11-09-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
443045123273000	05-18-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
443321123155201	05-18-94	<0.10000	<0.00100	<0.00100	<0.00100	0.002000	<0.00100	<0.00100	<0.00100
14173500	05-26-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	11-01-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
444349123094000	05-16-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
444123122562200	05-16-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
14189000	05-17-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100

Table 18. Concentrations of organochlorine compounds in whole water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	GROSS PCB, TOTAL (UG/L)	GROSS PCN, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
433548123040600	05-20-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
440045122585600	05-19-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
440402123063900	06-13-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
441310122095801	05-27-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
440707123041300	05-19-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
442223123153703	05-19-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	11-01-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
442413123122500	05-19-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
443138123120901	05-26-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	06-03-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	11-02-94	<0.00100	0.001000	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	11-06-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	11-09-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
443045123273000	05-18-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
443321123155201	05-18-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
14173500	05-26-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	11-01-94	<0.00100	0.001000	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
444349123094000	05-16-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
444123122562200	05-16-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
14189000	05-17-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000

Table 18. Concentrations of organochlorine compounds in whole water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	STATION NAME	DATE	TIME	ALDRIN, TOTAL (UG/L)
445547123065400	RICKREAL CREEK NR MOUTH NR SALEM, OR	05-26-94	1540	<0.00100
14190970	PRINGLE C AT BUSH PARK AT SALEM, OR	11-23-94	1200	<0.00100
	PRINGLE C AT BUSH PARK AT SALEM, OR	11-30-94	1530	<0.00100
	PRINGLE C AT BUSH PARK AT SALEM, OR	11-30-94	1710	<0.00100
445037122573800	MILL CREEK AT DELANEY ROAD NR TURNER, OR	06-14-94	1140	<0.00100
	MILL CREEK AT DELANEY ROAD NR TURNER, OR	10-31-94	1410	<0.00100
	MILL CREEK AT DELANEY ROAD NR TURNER, OR	11-04-94	1120	<0.00100
	MILL CREEK AT DELANEY ROAD NR TURNER, OR	11-04-94	1420	<0.00100
14194150	SOUTH YAMHILL RIVER AT MCMINNVILLE, OR	05-17-94	1720	<0.00100
	SOUTH YAMHILL RIVER AT MCMINNVILLE, OR	11-02-94	1210	<0.00100
451355123093600	NORTH YAMHILL RIVER AT HWY. 99E NR MCMINNVILLE, OR	05-17-94	1220	<0.00100
451602122564400	WILLAMETTE RIVER NR NEWBERG, OR	05-31-94	1400	<0.00100
451502122524700	CHAMPOEG CREEK BELOW MISSION CR NR BUTTEVILLE, OR	05-26-94	1030	<0.00100
	CHAMPOEG CREEK BELOW MISSION CR NR BUTTEVILLE, OR	10-31-94	1300	<0.00100
14201300	ZOLLNER CREEK NEAR MT ANGEL, OR	05-25-94	1450	<0.00100
	ZOLLNER CREEK NEAR MT ANGEL, OR	10-28-94	1320	<0.00100
14202000	PUDDING RIVER AT AURORA, OREG.	05-25-94	1100	<0.00100
	PUDDING RIVER AT AURORA, OREG.	10-28-94	1710	<0.00100
	PUDDING RIVER AT AURORA, OREG.	10-29-94	1230	<0.00100
	PUDDING RIVER AT AURORA, OREG.	11-09-94	1300	<0.00100
451603122423301	MOLALLA R AT KNIGHTS BRIDGE NR CANBY, OR	05-25-94	1020	<0.00100
14206200	DAIRY CREEK AT RTE 8 NEAR HILLSBORO, OR	05-27-94	1640	<0.00100
	DAIRY CREEK AT RTE 8 NEAR HILLSBORO, OR	12-01-94	1140	<0.00100

Table 18. Concentrations of organochlorine compounds in whole water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	CHLORDANE, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	p,p'-DDD, TOTAL (UG/L)	p,p'-DDE, TOTAL (UG/L)	p,p'-DDT, TOTAL (UG/L)	ENDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)
445547123065400	05-26-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
14190970	11-23-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	11-30-94	<0.10000	0.002000	0.001000	0.002000	<0.00200	<0.00100	<0.00100	<0.00100
	11-30-94	<0.10000	0.003000	0.001000	0.002000	<0.00200	<0.00100	<0.00100	<0.00100
445037122573800	06-14-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	10-31-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	11-04-94	<0.10000	0.001000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	11-04-94	<0.10000	0.001000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
14194150	05-17-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	11-02-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
451355123093600	05-17-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
451602122564400	05-31-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
451502122524700	05-26-94	<0.10000	0.001000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	10-31-94	<0.10000	0.005000	0.001000	0.003000	0.002000	<0.00100	<0.00100	<0.00100
14201300	05-25-94	<0.10000	0.001000	<0.00100	<0.00100	<0.00100	<0.00100	0.006000	<0.00100
	10-28-94	<0.10000	0.002000	<0.00100	0.002000	0.002000	<0.00100	0.001000	<0.00100
14202000	05-25-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	10-28-94	<0.10000	0.001000	<0.00100	0.001000	0.002000	<0.00100	<0.00100	<0.00100
	10-29-94	<0.10000	0.001000	<0.00100	0.001000	0.001000	<0.00100	<0.00100	<0.00100
	11-09-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
451603122423301	05-25-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
14206200	05-27-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	12-01-94	<0.10000	0.001000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100

Table 18. Concentrations of organochlorine compounds in whole water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	GROSS PCB, TOTAL (UG/L)	GROSS PCN, TOTAL (UG/L)	PER-THANE, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
445547123065400	05-26-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
14190970	11-23-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	11-30-94	<0.00100	0.001000	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	11-30-94	<0.00100	0.001000	<0.01000	<0.01000	0.10000	<0.10000	<0.10000	<1.0000
445037122573800	06-14-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	10-31-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	11-04-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	11-04-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
14194150	05-17-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	11-02-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
451355123093600	05-17-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
451602122564400	05-31-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
451502122524700	05-26-94	<0.00100	0.03200	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	10-31-94	<0.00100	0.03000	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
14201300	05-25-94	<0.00100	0.002000	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	10-28-94	<0.00100	0.001000	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
14202000	05-25-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	10-28-94	<0.00100	0.006000	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	10-29-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	11-09-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
451603122423301	05-25-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
14206200	05-27-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	12-01-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000

Table 18. Concentrations of organochlorine compounds in whole water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	STATION NAME	DATE	TIME	ALDRIN, TOTAL (UG/L)
14206298	BRONSON CREEK AT 185TH AVE NEAR ALOHA, OR	05-27-94	1100	<0.00100
	BRONSON CREEK AT 185TH AVE NEAR ALOHA, OR	11-23-94	1030	<0.00100
14206950	FANNO CREEK AT DURHAM, OR	05-24-94	1420	<0.00100
	FANNO CREEK AT DURHAM, OR	10-27-94	1620	<0.00100
14207500	TUALATIN RIVER AT WEST LINN,OREG.	05-25-94	1540	<0.00100
	TUALATIN RIVER AT WEST LINN,OREG.	10-28-94	1610	<0.00100
452823122240900	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	05-24-94	1440	<0.00100
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	10-27-94	1640	<0.00100
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	10-28-94	1135	<0.00100
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	11-01-94	1100	<0.00100
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	11-03-94	1330	<0.00100
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	11-23-94	1410	<0.00100
453043122402200	COMMERCIAL/RESIDENTIAL RUNOFF AT HARBOR WAY, PORT, OR	06-17-94	2150	<0.00100
14211720	WILLAMETTE RIVER AT PORTLAND,OREG.	05-10-94	0939	<0.00100
	WILLAMETTE RIVER AT PORTLAND,OREG.	10-29-94	1230	<0.00100
	WILLAMETTE RIVER AT PORTLAND,OREG.	11-03-94	0956	<0.00100
	WILLAMETTE RIVER AT PORTLAND,OREG.	12-02-94	1040	<0.00100
453154122394200	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	05-31-94	1800	<0.01000
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-08-94	1800	<0.00100
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-08-94	1950	<0.00100
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-30-94	0840	<0.00100
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-30-94	1020	<0.00100
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	12-02-94	1020	<0.00100
14211805	WILLAMETTE R AB ST JOHNS BR AT PORTLAND,OREG.	05-23-94	0950	<0.00100

Table 18. Concentrations of organochlorine compounds in whole water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	CHLORDANE, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	p,p'-DDD, TOTAL (UG/L)	p,p'-DDE, TOTAL (UG/L)	p,p'-DDT, TOTAL (UG/L)	ENDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)
14206298	05-27-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	11-23-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
14206950	05-24-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	10-27-94	<0.10000	0.002000	<0.00100	<0.00100	<0.00200	<0.00100	<0.00100	<0.00100
14207500	05-25-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	0.002000	<0.00100
	10-28-94	<0.10000	0.001000	<0.00100	0.001000	0.002000	<0.00100	<0.00100	<0.00100
452823122240900	05-24-94	<0.10000	0.007000	0.001000	<0.00100	0.001000	<0.00100	<0.00100	<0.00100
	10-27-94	<0.10000	0.02000	0.002000	0.009000	0.01000	<0.00100	<0.00100	<0.00100
	10-28-94	<0.10000	0.02000	0.002000	0.006000	0.008000	<0.00100	<0.00100	<0.00100
	11-01-94	<0.10000	0.01000	0.001000	0.003000	0.002000	<0.00100	<0.00100	<0.00100
	11-03-94	<0.10000	0.02000	0.001000	0.002000	0.002000	<0.00100	<0.00100	<0.00100
	11-23-94	<0.10000	0.005000	<0.00100	<0.00100	0.002000	<0.00100	<0.00100	<0.00100
453043122402200	06-17-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
14211720	05-10-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	10-29-94	<0.10000	<0.00100	<0.00100	<0.00100	0.001000	<0.00100	<0.00100	<0.00100
	11-03-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	12-02-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
453154122394200	05-31-94	<0.10000	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000
	11-08-94	<0.10000	<0.00100	<0.00100	0.03000	0.03000	<0.00100	<0.00100	0.001000
	11-08-94	<0.10000	0.001000	<0.00100	0.002000	<0.00100	<0.00100	<0.00100	<0.00100
	11-30-94	<0.10000	0.002000	<0.00200	0.003000	<0.00200	<0.00100	<0.00100	<0.00100
	11-30-94	<0.10000	0.001000	<0.00100	0.003000	<0.00400	<0.00100	<0.00100	<0.00100
	12-02-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
14211805	05-23-94	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100

Table 18. Concentrations of organochlorine compounds in whole water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	GROSS PCB, TOTAL (UG/L)	GROSS PCN, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
14206298	05-27-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	11-23-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
14206950	05-24-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	10-27-94	<0.00100	0.001000	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
14207500	05-25-94	<0.00100	0.002000	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	10-28-94	<0.00100	0.002000	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
452823122240900	05-24-94	<0.00100	0.005000	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	10-27-94	<0.00100	0.001000	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	10-28-94	<0.00100	0.001000	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	11-01-94	<0.00100	0.006000	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	11-03-94	<0.00100	0.002000	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	11-23-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
453043122402200	06-17-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
14211720	05-10-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	10-29-94	<0.00100	0.007000	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	11-03-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	12-02-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
453154122394200	05-31-94	<0.01000	<0.01000	<0.01000	<0.10000	0.10000	<0.10000	<1.0000	<1.0000
	11-08-94	<0.00100	0.005000	<0.01000	<0.01000	0.20000	<0.10000	<0.10000	<1.0000
	11-08-94	<0.00100	0.004000	<0.01000	<0.01000	0.10000	<0.10000	<0.10000	<1.0000
	11-30-94	<0.00100	0.001000	<0.01000	<0.01000	0.10000	<0.10000	<0.10000	<1.0000
	11-30-94	<0.00100	0.001000	<0.01000	<0.01000	0.20000	<0.10000	<0.10000	<1.0000
	12-02-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
14211805	05-23-94	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000

Table 19. Concentrations of organochlorine and organophosphorus compounds in filtered water from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93

[USGS laboratory schedule 8307]

STATION NUMBER	STATION NAME	DATE	TIME	ALDRIN, DIS-SOLVED (UG/L)
440313123091100	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	04-16-92	1410	<0.00100
	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	10-16-92	1345	<0.00100
14201300	ZOLLNER CREEK NEAR MT ANGEL, OR	06-01-93	1115	<0.00100
14202000	PUDDING RIVER AT AURORA, OREG.	04-27-93	1445	<0.00100
453115122535500	BEAVERTON C AT 216TH AVE NEAR ORENCO, OR	03-31-93	1810	<0.00100
14206950	FANNO CREEK AT DURHAM, OR	03-01-93	1830	<0.00100
14211550	JOHNSON CREEK AT MILWAUKIE,OREG.	03-14-93	1745	<0.00100

STATION NUMBER	DATE	CHLOR-DANE, DIS-SOLVED (UG/L)	p,p'-DDD, DIS-SOLVED (UG/L)	p,p'-DDE, DIS-SOLVED (UG/L)	p,p'-DDT, DIS-SOLVED (UG/L)	DI-ELDRIN DIS-SOLVED (UG/L)	ENDO-SULFAN DISSOLV (UG/L)	ENDRIN, DIS-SOLVED (UG/L)	HEPTA-CHLOR EPOXIDE DIS-SOLVED (UG/L)
440313123091100	04-16-92	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	10-16-92	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
14201300	06-01-93	<0.10000	<0.00100	<0.00100	<0.00100	--	0.002000	<0.00100	<0.00100
14202000	04-27-93	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
453115122535500	03-31-93	<0.10000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
14206950	03-01-93	<0.10000	<0.00100	<0.00100	<0.00100	0.001000	<0.00100	<0.00100	<0.00100
14211550	03-14-93	<0.10000	0.001000	<0.00100	<0.00100	0.002000	<0.00100	<0.00100	<0.00100

STATION NUMBER	DATE	HEPTA-CHLOR, DIS-SOLVED (UG/L)	LINDANE DIS-SOLVED (UG/L)	METH-OXY-CHLOR DISSOLV (UG/L)	MIREX, DIS-SOLVED (UG/L)	GROSS PCB, DIS-SOLVED (UG/L)	GROSS PCN, DIS_ SOLVED (UG/L)	PER-THANE DISSOLV (UG/L)	TOX-APHENE, DIS-SOLVED (UG/L)
440313123091100	04-16-92	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
	10-16-92	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
14201300	06-01-93	<0.00100	--	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
14202000	04-27-93	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
453115122535500	03-31-93	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
14206950	03-01-93	<0.00100	<0.00100	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000
14211550	03-14-93	<0.00100	0.001000	<0.01000	<0.01000	<0.10000	<0.10000	<0.10000	<1.0000

STATION NUMBER	DATE	CHLOR-PYRIFOS DIS-SOLVED (UG/L)	DI-AZINON, DIS-SOLVED (UG/L)	ETHION DISSOLV (UG/L)	FONOFOS DIS-SOLVED (UG/L)	MALA-THION, DIS-SOLVED (UG/L)	METHYL PARA-THION, DIS-SOLVED (UG/L)	PARA-THION, DIS-SOLVED (UG/L)	TRI-THION DISSOLV (UG/L)
440313123091100	04-16-92	<0.02000	0.02000	<0.02000	<0.02000	<0.02000	<0.02000	<0.02000	<0.02000
	10-16-92	0.01000	<0.01000	<0.01000	0.07000	<0.01000	<0.01000	<0.01000	<0.01000
14201300	06-01-93	--	--	--	--	--	--	--	--
14202000	04-27-93	<0.00500	0.01000	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
453115122535500	03-31-93	--	0.06000	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
14206950	03-01-93	<0.01000	0.03000	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000
14211550	03-14-93	0.01000	0.02000	<0.01000	<0.01000	0.02000	<0.01000	<0.01000	<0.01000

Table 20. Concentrations of organochlorine compounds in filtered water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

[USGS laboratory schedule 8369; ug/L, micrograms per liter]

Station Name	Station number	Date	Time	Aldrin (ug/L)	Chlordane (ug/L)	p, p' DDD (ug/L)	p, p' DDE (ug/L)	p, p' DDT (ug/L)	Dieldrin (ug/L)	Endosulfan I (ug/L)
Muddy Cr. nr Peoria, OR	443138123120901	941102	1010	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001
		941106	1200	<.001	<.1	<.001	<.001	<.001	<.001	<.001
Mill Cr. nr Turner, OR	445037122573800	941104	1120	<.001	<.1	<.001	<.001	<.001	.001	<.001
Pudding R. at Aurora, OR	14202000	941028	1710	<.001	<.1	<.001	<.001	<.001	.001	<.001
Johnson Cr. nr Gresham, OR	452823122240900	941027	1640	<.001	<.1	.001	.003	.003	.010	<.001
		941028	1135	<.001	<.1	.001	.002	.003	.010	<.001
Willamette R. at Portland, OR	14211720	941029	1230	<.001	<.1	<.001	<.001	<.001	<.001	<.001
Interstate 84 Trans Corridor at SE 3rd at Portland, OR	453154122394200	941108	1800	<.001	<.1	.001	.001	.003	<.001	<.001

Station number	Date	Endrin	HeptachlorEpoxide (ug/L)	Heptachlor (ug/L)	Lindane (ug/L)	Methoxy-chlor (ug/L)	Mirex (ug/L)	Gross PCB (ug/L)	Gross PCN (ug/L)	Perthane (ug/L)	Toxaphene (ug/L)
443138123120901	941102	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.1	<0.1	<0.1	<1.0
	941106	<.001	<.001	<.001	<.001	<.01	<.01	<.1	<.1	<.1	<1.0
445037122573800	941104	<.001	<.001	<.001	<.001	<.01	<.01	<.1	<.1	<.1	<1.0
14202000	941028	<.001	<.001	<.001	<.001	<.01	<.01	<.1	<.1	<.1	<1.0
452823122240900	941027	<.001	<.001	<.001	.001	<.01	<.01	<.1	<.1	<.1	<1.0
	941028	<.001	<.001	<.001	.001	<.01	<.01	<.1	<.1	<.1	<1.0
14211720	941029	<.001	<.001	<.001	.001	<.01	<.01	<.1	<.1	<.1	<1.0
453154122394200	941108	<.001	<.001	<.001	.003	<.01	<.01	.1	<.1	<.1	<1.0

Table 21. Concentrations of organochlorine and organophosphorus compounds associated with suspended sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93

[USGS laboratory schedule 8308; UG/L, micrograms per liter]

STATION NUMBER	STATION NAME	DATE	TIME	ALDRIN, SUS-PENDED (UG/L)	CHLOR-DANE, SUS-PENDED (UG/L)	p,p′-DDD, SUS-PENDED (UG/L)
440313123091100	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	04-16-92	1410	<0.00100	<0.10000	<0.00100
	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	10-16-92	1345	<0.00100	<0.10000	<0.00100
14201300	ZOLLNER CREEK NEAR MT ANGEL, OR	06-01-93	1115	<0.00100	<0.10000	<0.00100
14202000	PUDDING RIVER AT AURORA, OREG.	04-27-93	1445	<0.00100	<0.10000	<0.00100
453115122535500	BEAVERTON C AT 216TH AVE NEAR ORENCO, OR	03-31-93	1810	<0.00100	<0.10000	<0.00100
14206950	FANNO CREEK AT DURHAM, OR	03-01-93	1830	<0.00100	<0.10000	<0.00100
14211550	JOHNSON CREEK AT MILWAUKIE,OREG.	03-14-93	1745	<0.00100	<0.10000	<0.00100
453547122463000	WILLAMETTE RIVER AT LINNTON, OR	10-26-92	1000	<0.00100	<0.10000	<0.00100

STATION NUMBER	DATE	p,p′-DDE, SUS-PENDED (UG/L)	p,p′-DDT, SUS-PENDED (UG/L)	DI-ELDRIN, SUS-PENDED (UG/L)	ENDO-SULFAN, SUS-PENDED (UG/L)	ENDRIN, SUS-PENDED (UG/L)	HEPTA-CHLOR EPOXIDE, SUS-PENDED (UG/L)	HEPTA-CHLOR, SUS-PENDED (UG/L)	LINDANE, SUS-PENDED (UG/L)	METH-OXY-CHLOR, SUS-PENDED (UG/L)	MIREX, SUS-PENDED (UG/L)
440313123091100	04-16-92	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.01000	<0.01000
	10-16-92	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.01000	<0.01000
14201300	06-01-93	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.01000	<0.01000
14202000	04-27-93	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.01000	<0.01000
453115122535500	03-31-93	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.01000	<0.01000
14206950	03-01-93	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.01000	<0.01000
14211550	03-14-93	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.01000	<0.01000
453547122463000	10-26-92	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.01000	<0.01000

STATION NUMBER	DATE	GROSS PCB, SUS-PENDED (UG/L)	GROSS PCN, SUS-PENDED (UG/L)	PER-THANE, SUS-PENDED (UG/L)	TOX-APHENE, SUS-PENDED (UG/L)	DI-AZINON, SUS-PENDED (UG/L)	ETHION, SUS-PENDED (UG/L)	MALA-THION, SUS-PENDED (UG/L)	METHYL PARA-THION, SUS-PENDED (UG/L)	PARA-THION, SUS-PENDED (UG/L)	TRI-THION, SUS-PENDED (UG/L)
440313123091100	04-16-92	<0.10000	<0.10000	<0.10000	<1.0000	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300
	10-16-92	<0.10000	<0.10000	<0.10000	<1.0000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
14201300	06-01-93	<0.10000	<0.10000	<0.10000	<1.0000	0.57000	<0.00100	0.79000	<0.00100	<0.00100	<0.00100
14202000	04-27-93	<0.10000	<0.10000	<0.10000	<1.0000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
453115122535500	03-31-93	<0.10000	<0.10000	<0.10000	<1.0000	0.004000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
14206950	03-01-93	<0.10000	<0.10000	<0.10000	<1.0000	0.005000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
14211550	03-14-93	<0.10000	<0.10000	<0.10000	<1.0000	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
453547122463000	10-26-92	<0.10000	<0.10000	<0.10000	<1.0000	0.000100	0.000100	0.000100	0.000100	0.000100	0.000100

Table 22. Concentrations of organochlorine compounds associated with suspended sediment from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

[USGS laboratory schedule 8370; ug/L, micrograms per liter]

Station Name	Station number	Date	Time	Aldrin (ug/L)	Chlordane (ug/L)	p, p' DDD (ug/L)	p, p' DDE (ug/L)	p, p' DDT (ug/L)	Dieldrin (ug/L)	Endosulfan I (ug/L)
Muddy Cr. nr Peoria, OR	443138123120901	941102	1010	<0.003	<0.3	<0.003	<0.003	<0.003	<0.012	<0.003
		941106	1200	<.001	<.1	<.001	<.001	<.001	<.004	<.001
Mill Cr. nr Turner, OR	445037122573800	941104	1120	<.002	<.2	<.002	<.002	<.002	<.008	<.002
Pudding R. at Aurora, OR	14202000	941028	1710	<.002	<.2	.002	.003	.004	<.008	<.002
Johnson Cr. nr Gresham, OR	452823122240900	941027	1640	<.004	<.4	.006	.020	.031	<.016	<.004
		941028	1135	<.002	<.2	.002	.005	.007	<.008	<.002
Willamette R. at Portland, OR	14211720	941029	1230	<.001	<.1	<.001	<.001	<.001	<.004	<.001
Interstate 84 Trans Corridor at SE 3rd at Portland, OR	453154122394200	941108	1800	<.001	<.1	.002	.021	.018	<.004	<.001

Station number	Date	Endrin	HeptachlorEpoxide (ug/L)	Heptachlor (ug/L)	Lindane (ug/L)	Methoxy-chlor (ug/L)	Mirex (ug/L)	Gross PCB (ug/L)	Gross PCN (ug/L)	Perthane (ug/L)	Toxaphene (ug/L)
443138123120901	941102	<0.003	<0.003	<0.003	<0.003	<0.012	<0.003	<0.3	<0.3	<0.3	<3.0
	941106	<.001	<.001	<.001	<.001	<.004	<.001	<.1	<.1	<.1	<1.0
445037122573800	941104	<.002	<.002	<.002	<.002	<.008	<.002	<.2	<.2	<.2	<2.0
14202000	941028	<.002	<.002	<.002	<.002	<.008	<.002	<.2	<.2	<.2	<2.0
452823122240900	941027	<.004	<.004	<.004	<.004	<.016	<.004	<.4	<.4	<.4	<4.0
	941028	<.002	<.002	<.002	<.002	<.008	<.002	<.2	<.2	<.2	<2.0
14211720	941029	<.001	<.001	<.001	<.001	<.004	<.001	<.1	<.1	<.1	<1.0
453154122394200	941108	<.001	<.001	<.001	<.001	<.004	<.001	<.1	<.1	<.1	<1.0

Table 23. Concentrations of organochlorine compounds associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992

[USGS laboratory schedule 2501; WS,wet sieved; DW, dry weight; BM, bed material; G/KG, grams per kilogram; UG/KG, micrograms per kilogram]

STATION NUMBER	STATION NAME	DATE	TIME	CARBON, ORGANIC SED, BM WS,<2MM DW, REC (G/KG)	CARBON, INORG, SED, BM WS,<2MM DW, REC (G/KG)	CARBON, ORG + INORG SED, BM WS,<2MM (G/KG)
440313123091100	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	08-25-92	1230	18.000	0.40000	18.000
14165500	MCKENZIE RIVER NEAR COBURG,OR	08-25-92	1645	85.000	0.20000	85.000
443207123145500	WILLAMETTE RIVER NEAR CORVALLIS, OR	08-26-92	1030	18.000	<0.10000	18.000
443819123064000	CALAPOOIA RIVER AT MOUTH AT ALBANY, OR	08-26-92	1500	13.000	1.4000	14.000
444032123050600	MIDDLE FOURTH LAKE NEAR ALBANY, OR	09-01-92	1100	77.000	0.20000	77.000
444416123030800	SANTIAM RIVER NEAR JEFFERSON, OR	08-29-92	1000	3.0000	<0.10000	3.0000
445543123084400	RICKREALL CREEK NEAR RICKREALL, OR	08-28-92	1345	12.000	<0.10000	12.000
451320123041100	YAMHILL RIVER AT DAYTON, OR	08-27-92	1400	3.7000	<0.10000	3.7000
451705122575100	WILLAMETTE RIVER AT NEWBERG, OR	09-01-92	1600	11.000	<0.10000	11.000
452950122492900	BEAVERTON CREEK AT BEAVERTON, OR	08-23-92	1100	46.000	<0.10000	46.000
452221122362400	CLACKAMAS RIVER AT OREGON CITY, OR	08-24-92	1130	5.8000	0.30000	6.1000
452847122244500	JOHNSON CREEK AT GRESHAM, OR	08-21-92	1330	9.4000	0.60000	10.000
453547122463000	WILLAMETTE RIVER AT LINNTON, OR	09-09-92	1130	17.000	<0.10000	17.000
453205122223701	BEAVER CREEK NEAR TROUTDALE, OR	08-22-92	0945	8.4000	0.40000	8.8000

Table 23. Concentrations of organochlorine compounds associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992—Continued

STATION NUMBER	DATE	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	ALDRIN, SED, BM WS,<2MM DW, REC (UG/KG)	ALPHA-HCH, SED, BM WS,<2MM DW, REC (UG/KG)	BETA-HCH, SED, BM WS,<2MM DW, REC (UG/KG)	TRANS-CHLOR-DANE, SED, BM WS,<2MM DW, REC (UG/KG)	CIS-CHLOR-DANE, SED, BM WS,<2MM DW, REC (UG/KG)	CHLORO-NEB, SED, BM WS,<2MM DW, REC (UG/KG)	CIS-NONA-CHLOR, SED, BM WS,<2MM DW, REC (UG/KG)	CIS-PER-METHRIN SED, BM WS,<2MM DW, REC (UG/KG)
440313123091100	08-25-92	23.000	<2.0000	<2.0000	<3.0000	<2.0000	<2.0000	<10.000	<2.0000	<10.000
14165500	08-25-92	84.000	<2.5000	<2.5000	<2.5000	<2.5000	<2.5000	<12.000	<2.5000	--
443207123145500	08-26-92	22.000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<5.0000	<1.0000	<5.0000
443819123064000	08-26-92	33.000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<5.0000	<1.0000	<5.0000
444032123050600	09-01-92	95.000	<2.0000	<2.0000	<2.0000	<2.0000	<2.0000	<10.000	<2.0000	<10.000
444416123030800	08-29-92	3.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<5.0000	<1.0000	<5.0000
445543123084400	08-28-92	17.000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<5.0000	<1.0000	<5.0000
451320123041100	08-27-92	9.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<5.0000	<1.0000	<5.0000
451705122575100	09-01-92	20.000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<5.0000	<1.0000	<5.0000
452950122492900	08-23-92	66.000	<2.0000	<2.0000	<2.0000	8.0000	8.3000	<10.000	3.5000	<10.000
452221122362400	08-24-92	4.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<5.0000	<1.0000	<5.0000
452847122244500	08-21-92	34.000	<1.0000	<1.0000	<1.0000	2.6000	2.4000	<5.0000	<2.0000	<5.0000
453547122463000	09-09-92	49.000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<5.0000	<1.0000	<5.0000
453205122223701	08-22-92	37.000	<1.0000	<1.0000	<1.0000	7.6000	7.2000	<5.0000	4.6000	<5.0000

Table 23. Concentrations of organochlorine compounds associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992—Continued

STATION NUMBER	DATE	HEXA-CHLORO-BENZENE SED, BM WS,<2MM DW, REC (UG/KG)	DCPA, SED, BM WS,<2MM DW, REC (UG/KG)	p,p'-DDD, SED, BM WS,<2MM DW, REC (UG/KG)	o,p'-DDD, SED, BM WS,<2MM DW, REC (UG/KG)	o,p'-DDE, SED, BM WS,<2MM DW, REC (UG/KG)	p,p'-DDE, SED, BM WS,<2MM DW, REC (UG/KG)	p,p'-DDT, SED, BM WS,<2MM DW, REC (UG/KG)	o,p'-DDT, SED, BM WS,<2MM DW, REC (UG/KG)	DIEL-DRIN, SED, BM WS,<2MM DW, REC (UG/KG)
440313123091100	08-25-92	<50.000	<10.000	<2.0000	<2.0000	<2.0000	<2.0000	<4.0000	<4.0000	<2.0000
14165500	08-25-92	<50.000	<12.000	--	--	<2.5000	<2.5000	--	--	<2.5000
443207123145500	08-26-92	<50.000	<5.0000	<1.0000	<1.0000	<1.0000	<1.0000	<2.0000	<2.0000	<1.0000
443819123064000	08-26-92	<50.000	<5.0000	--	--	<1.0000	<1.0000	--	--	<1.0000
444032123050600	09-01-92	130.00	<10.000	<2.0000	<2.0000	<2.0000	<2.0000	<4.0000	<4.0000	<2.0000
444416123030800	08-29-92	<50.000	<5.0000	--	--	<1.0000	<1.0000	--	--	<1.0000
445543123084400	08-28-92	<50.000	<5.0000	--	--	<1.0000	<1.0000	--	--	<1.0000
451320123041100	08-27-92	<50.000	<5.0000	<1.0000	<1.0000	<1.0000	<1.0000	<2.0000	<2.0000	<1.0000
451705122575100	09-01-92	<50.000	<5.0000	<1.0000	<1.0000	<1.0000	<1.0000	<2.0000	<2.0000	<1.0000
452950122492900	08-23-92	<50.000	<10.000	88.000	25.000	<2.0000	8.3000	21.000	18.000	4.2000
452221122362400	08-24-92	<50.000	<5.0000	<1.0000	<1.0000	<1.0000	<1.0000	<2.0000	<2.0000	<1.0000
452847122244500	08-21-92	<50.000	<5.0000	110.00	27.000	1.9000	120.00	81.000	44.000	15.000
453547122463000	09-09-92	<50.000	<5.0000	5.8000	<1.0000	<1.0000	3.8000	14.000	<2.0000	<1.0000
453205122223701	08-22-92	<50.000	<5.0000	21.000	<1.0000	<1.0000	16.000	17.000	<2.0000	18.000

Table 23. Concentrations of organochlorine compounds associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992—Continued

STATION NUMBER	DATE	ENDO-SULFAN I, SED, BM WS,<2MM DW, REC (UG/KG)	ENDRIN, SED, BM WS,<2MM DW, REC (UG/KG)	HEPTA-CHLOR EPOXIDE SED, BM WS,<2MM DW, REC (UG/KG)	HEPTA-CHLOR, SED, BM WS,<2MM DW, REC (UG/KG)	ISODRIN SED, BM WS,<2MM DW, REC (UG/KG)	LINDANE SED, BM WS,<2MM DW, REC (UG/KG)	MIREX, SED, BM WS,<2MM DW, REC (UG/KG)	o,p'-METHOXY CHLOR, SED, BM WS,<2MM DW, REC (UG/KG)	OXY-CHLOR-DANE, SED, BM WS,<2MM DW, REC (UG/KG)
440313123091100	08-25-92	<2.0000	<4.0000	<2.0000	<2.0000	<2.0000	<2.0000	<2.0000	<10.000	<2.0000
14165500	08-25-92	<2.5000	<5.0000	<2.5000	<2.5000	<2.5000	<2.5000	<2.5000	<12.000	<2.5000
443207123145500	08-26-92	<1.0000	<2.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<5.0000	<1.0000
443819123064000	08-26-92	<1.0000	<2.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<5.0000	<1.0000
444032123050600	09-01-92	<2.0000	<4.0000	<2.0000	<2.0000	<2.0000	<2.0000	<2.0000	<10.000	<2.0000
444416123030800	08-29-92	<1.0000	<2.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	--	<1.0000
445543123084400	08-28-92	<1.0000	<2.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	--	<1.0000
451320123041100	08-27-92	<1.0000	<2.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<5.0000	<1.0000
451705122575100	09-01-92	<1.0000	<2.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<5.0000	<1.0000
452950122492900	08-23-92	<2.0000	<4.0000	<2.0000	<2.0000	<2.0000	<2.0000	<2.0000	<10.000	<2.0000
452221122362400	08-24-92	<1.0000	<2.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<5.0000	<1.0000
452847122244500	08-21-92	<2.0000	<2.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<5.0000	<1.0000
453547122463000	09-09-92	<1.0000	<2.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<5.0000	<1.0000
453205122223701	08-22-92	<1.0000	<2.0000	1.1000	<1.0000	<1.0000	<1.0000	<1.0000	<5.0000	<1.0000

Table 23. Concentrations of organochlorine compounds associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992—Continued

STATION NUMBER	DATE	PCB, SED, BM WS,<2MM DW, REC (UG/KG)	PENTA-CHLORO-ANISOLE SED, BM WS,<2MM DW, REC (UG/KG)	p,p'-METHOXY CHLOR, SED, BM WS,<2MM DW, REC (UG/KG)	TOXA-PHENE SED, BM WS,<2MM DW, REC (UG/KG)	TRANS-NONA-CHLOR, SED, BM WS,<2MM DW, REC (UG/KG)	TRANS-PER-METHRIN SED, BM WS,<2MM DW, REC (UG/KG)	ALPHA-HCH, D6 SURROGT SED, BM WS,<2MM DW, REC (PERCENT)	BIPHENL 35DICHR SURROGT SED, BM WS,<2MM DW, REC (PERCENT)	OCTCHLR BIPHENL SURROGT SED, BM WS,<2MM DW, REC (PERCENT)
440313123091100	08-25-92	<200.00	<50.000	<10.000	<200.00	<2.0000	<10.000	84.000	110.00	30.000
14165500	08-25-92	<250.00	<50.000	<12.000	<250.00	<2.5000	<12.000	61.000	34.000	43.000
443207123145500	08-26-92	<100.00	<50.000	<5.0000	<200.00	<1.0000	<5.0000	91.000	77.000	41.000
443819123064000	08-26-92	<100.00	<50.000	<5.0000	<200.00	<1.0000	--	81.000	50.000	53.000
444032123050600	09-01-92	1700.0	<50.000	<10.000	<200.00	<2.0000	<10.000	48.000	110.00	98.000
444416123030800	08-29-92	<100.00	<50.000	--	<200.00	<1.0000	<5.0000	56.000	45.000	39.000
445543123084400	08-28-92	<100.00	<50.000	--	<200.00	<1.0000	<5.0000	74.000	54.000	55.000
451320123041100	08-27-92	<100.00	<50.000	<5.0000	<200.00	<1.0000	<5.0000	44.000	66.000	69.000
451705122575100	09-01-92	<100.00	<50.000	<5.0000	<200.00	<1.0000	<5.0000	47.000	69.000	65.000
452950122492900	08-23-92	110.00	<50.000	<10.000	<200.00	7.0000	<10.000	40.000	66.000	36.000
452221122362400	08-24-92	100.00	<50.000	<5.0000	<200.00	<1.0000	<5.0000	43.000	39.000	42.000
452847122244500	08-21-92	<100.00	<50.000	<5.0000	340.00	2.6000	<5.0000	43.000	43.000	43.000
453547122463000	09-09-92	<100.00	<50.000	<5.0000	<200.00	<1.0000	<5.0000	91.000	110.00	94.000
453205122223701	08-22-92	<100.00	<50.000	<5.0000	<200.00	7.3000	<5.0000	41.000	47.000	40.000

Table 24. Concentrations of organic acids in whole water from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992

[USGS laboratory schedule 8331; UGd/L, micrograms per liter]

STATION NUMBER	STATION NAME	DATE	TIME	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	DICAMBA TOTAL (UG/L)	PICLORAM TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)
440313123091100	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	04-16-92	1410	1.7000	<0.01000	0.02000	0.09000	<0.01000	<0.01000
	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	10-16-92	1345	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000
453547122463000	WILLAMETTE RIVER AT LINNTON, OR	10-26-92	1000	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000

Table 25. Concentrations of semi-volatile compounds in whole water from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1993

[USGS laboratory schedule 1383; UG/L, micrograms per gram]

STATION NUMBER	STATION NAME	DATE	TIME	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)
443207123145500	WILLAMETTE RIVER NEAR CORVALLIS, OR	08-24-93	1615	<5.0000	<5.0000	<5.0000
443138123120901	MUDDY CREEK NEAR PEORIA, OR	08-24-93	1300	<5.0000	<5.0000	<5.0000
451309123041501	PALMER C AT DAYTON, OR	09-07-93	1045	<5.0000	<5.0000	<5.0000
14201300	ZOLLNER CREEK NEAR MT ANGEL, OR	07-27-93	1015	<5.0000	<5.0000	<5.0000
14206950	FANNO CREEK AT DURHAM, OR	07-22-93	1000	<5.0000	<5.0000	<5.0000

STATION NUMBER	DATE	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	BENZI-DINE TOTAL (UG/L)	BENZO (A) ANTHR ACENE TOTAL (UG/L)	BENZO (A) PYRENE TOTAL (UG/L)	BENZO (B) FLUOR-ANTHENE TOTAL (UG/L)	BENZO (GHI) PERY-LENE TOTAL (UG/L)	BENZO (K) FLUOR-ANTHENE TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS (2-CHLORO-ETHYL) ETHER TOTAL (UG/L)
443207123145500	08-24-93	<5.0000	<40.000	<10.000	<10.000	<10.000	<10.000	<10.000	<5.0000	<5.0000	<5.0000
443138123120901	08-24-93	<5.0000	<40.000	<10.000	<10.000	<10.000	<10.000	<10.000	<5.0000	<5.0000	<5.0000
451309123041501	09-07-93	<5.0000	<40.000	<10.000	<10.000	<10.000	<10.000	<10.000	<5.0000	<5.0000	<5.0000
14201300	07-27-93	<5.0000	<40.000	<10.000	<10.000	<10.000	<10.000	<10.000	<5.0000	<5.0000	<5.0000
14206950	07-22-93	<5.0000	<40.000	<10.000	<10.000	<10.000	<10.000	<10.000	<5.0000	<5.0000	<5.0000

STATION NUMBER	DATE	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLORO 3-METHYL PHENOL TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	1,2-DI-PHENYL-HYDRA-ZINE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
443207123145500	08-24-93	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	<10.000	<5.0000	<5.0000	<5.0000
443138123120901	08-24-93	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	<10.000	<5.0000	<5.0000	<5.0000
451309123041501	09-07-93	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	<10.000	<5.0000	<5.0000	<5.0000
14201300	07-27-93	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	<10.000	<5.0000	<0.20000	<0.20000
14206950	07-22-93	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	<10.000	<5.0000	<5.0000	<5.0000

STATION NUMBER	DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	3,3'-DI-CHLORO-BENZI-DINE TOTAL (UG/L)	DI-N-BUTYL PHTHA-LATE TOTAL (UG/L)	DI-N-OCTYL PHTHA-LATE TOTAL (UG/L)
443207123145500	08-24-93	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	0.17000	<10.000
443138123120901	08-24-93	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	0.24900	<10.000
451309123041501	09-07-93	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	1.8000	<10.000
14201300	07-27-93	<0.20000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	<5.0000	<10.000
14206950	07-22-93	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	<5.0000	<10.000

Table 25. Concentrations of semi-volatile compounds in whole water from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1993—Continued

STATION NUMBER	DATE	1,2,5,6 DIBENZO (AH)AN-THRACENE TOTAL (UG/L)	DI-ETHYL PHTHA-LATE TOTAL (UG/L)	DI-METHYL PHTHA-LATE TOTAL (UG/L)	4,6-DINITRO 2-METHYL PHENOL TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHA-LATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)
443207123145500	08-24-93	<10.000	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000
443138123120901	08-24-93	<10.000	<5.0000	1.5000	<30.000	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000
451309123041501	09-07-93	<10.000	0.80000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000
14201300	07-27-93	<10.000	<5.0000	1.4000	<30.000	<5.0000	<5.0000	<5.0000	<5.0000	<0.20000
14206950	07-22-93	<10.000	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000

STATION NUMBER	DATE	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENYL-AMINE TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)
443207123145500	08-24-93	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	<5.0000
443138123120901	08-24-93	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	<5.0000
451309123041501	09-07-93	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	<5.0000
14201300	07-27-93	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	<0.20000
14206950	07-22-93	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	<5.0000

STATION NUMBER	DATE	NITRO-BENZENE TOTAL (UG/L)	N-NITRO-SODI-METHYL-AMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL TOTAL (UG/L)	PYRENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)
443207123145500	08-24-93	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000	<5.0000	<20.000
443138123120901	08-24-93	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000	<5.0000	<20.000
451309123041501	09-07-93	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000	<5.0000	<20.000
14201300	07-27-93	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000	<0.20000	<20.000
14206950	07-22-93	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000	<5.0000	<20.000

Table 26. Concentrations of semi-volatile compounds in filtered water from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93

[USGS laboratory schedule 8005]

STATION NUMBER	STATION NAME	DATE	TIME	ACE-NAPHTH-ENE DISSOLV (UG/L)	ACE-NAPHTH-YLENE DISSOLV (UG/L)
440313123091100	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	04-16-92	1415	<5.0000	<5.0000
	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	10-16-92	1205	<5.0000	<5.0000
14202000	PUDDING RIVER AT AURORA, OREG.	04-27-93	1450	<5.0000	<5.0000
453115122535500	BEAVERTON C AT 216TH AVE NEAR ORENCO, OR	03-31-93	1815	<5.0000	<5.0000
14206950	FANNO CREEK AT DURHAM, OR	03-01-93	1835	<5.0000	<5.0000
14211550	JOHNSON CREEK AT MILWAUKIE,OREG.	03-14-93	1750	<5.0000	<5.0000
453547122463000	WILLAMETTE RIVER AT LINNTON, OR	10-26-92	1005	<5.0000	<5.0000

STATION NUMBER	DATE	ANTHRA-CENE DISSOLV (UG/L)	4-BROMO-PHENYL PHENYL ETHER DISSOLV (UG/L)	BENZI-DINE DISSOLV (UG/L)	BENZO (A) ANTHRA-CENE DISSOLV (UG/L)	BENZO (A) PYRENE DISSOLV (UG/L)	BENZO (B) FLUOR-ANTHENE DISSOLV (UG/L)	BENZO (GHI) PERYL-LENE DISSOLV (UG/L)	BENZO (K) FLUOR-ANTHENE DISSOLV (UG/L)	N-BUTYL BENZYL PHTHAL-ATE DISSOLV (UG/L)
440313123091100	04-16-92	<5.0000	<5.0000	<40.000	<10.000	<10.000	<10.000	<10.000	<10.000	<5.0000
	10-16-92	<5.0000	<5.0000	<40.000	<10.000	<10.000	<10.000	<10.000	<10.000	<5.0000
14202000	04-27-93	<5.0000	<5.0000	<40.000	<10.000	<10.000	<10.000	<10.000	<10.000	<5.0000
453115122535500	03-31-93	<5.0000	<5.0000	<40.000	<10.000	<10.000	<10.000	<10.000	<10.000	<5.0000
14206950	03-01-93	<5.0000	<5.0000	<40.000	0.69000	<10.000	<10.000	<10.000	<10.000	1.3300
14211550	03-14-93	<5.0000	<5.0000	<40.000	<10.000	<10.000	<10.000	<10.000	<10.000	1.3250
453547122463000	10-26-92	<5.0000	<5.0000	<40.000	<10.000	<10.000	<10.000	<10.000	<10.000	<5.0000

STATION NUMBER	DATE	BIS (2-CHLORO-ETHOXY) METHANE DISSOLV (UG/L)	BIS (2-CHLORO-ETHYL) ETHER DISSOLV (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER DISSOLV (UG/L)	2-CHLORO-NAPH-THALENE DISSOLV (UG/L)	2-CHLORO-PHENOL DISSOLV (UG/L)	4-CHLORO-PHENYL PHENYL ETHER DISSOLV (UG/L)	4-CHLORO-3-METHYL-PHENOL DISSOLV (UG/L)	CHRY-SENE DISSOLV (UG/L)	1,2-DI-PHENYL-HYDRA-ZINE DISSOLV (UG/L)
440313123091100	04-16-92	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	<10.000	<5.0000
	10-16-92	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	<10.000	<5.0000
14202000	04-27-93	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	<10.000	<5.0000
453115122535500	03-31-93	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	<10.000	<5.0000
14206950	03-01-93	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	<10.000	<5.0000
14211550	03-14-93	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	<10.000	<5.0000
453547122463000	10-26-92	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	<10.000	<5.0000

STATION NUMBER	DATE	1,2-DI-CHLORO-BENZENE DISSOLV (UG/L)	1,3-DI-CHLORO-BENZENE DISSOLV (UG/L)	1,4-DI-CHLORO-BENZENE DISSOLV (UG/L)	2,4-DI-CHLORO-PHENOL DISSOLV (UG/L)	2,4-DI-NITRO PHENOL DISSOLV (UG/L)	2,4-DI-NITRO-TOLUENE DISSOLV (UG/L)	2,6-DI-NITRO-TOLUENE DISSOLV (UG/L)	3,3'-DI-CHLORO-BENZI-DINE DISSOLV (UG/L)	DI-N-BUTYL PHTHAL-ATE DISSOLV (UG/L)
440313123091100	04-16-92	<5.0000	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	<5.0000
	10-16-92	<5.0000	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	<5.0000
14202000	04-27-93	<5.0000	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	<5.0000
453115122535500	03-31-93	<5.0000	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	<5.0000
14206950	03-01-93	<5.0000	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	1.5000
14211550	03-14-93	<5.0000	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	1.3100
453547122463000	10-26-92	<5.0000	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	<5.0000

Table 26. Concentrations of semi-volatile compounds in filtered water from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93—Continued

STATION	NUMBER	DATE	DI-N-OCTYL PHTHAL-ATE DISSOLV (UG/L)	1,2,5,6-DIBENZ (AH) ANTHR-ACENE DISSOLV (UG/L)	DIETHYL PHTHAL-ATE DISSOLV (UG/L)	DI-METHYL PHTHAL-ATE DISSOLV (UG/L)	2,4-DI-METHYL-PHENOL DISSOLV (UG/L)	4,6-DINITRO 2-METHYL-PHENOL DISSOLV (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE DISSOLV (UG/L)	FLUOR-ANTHENE DISSOLV (UG/L)	FLUOR-ENE DISSOLV (UG/L)
440313123091100		04-16-92	<10.000	<10.000	<5.0000	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000
		10-16-92	<10.000	<10.000	<5.0000	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000
14202000		04-27-93	<10.000	<10.000	<5.0000	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000
453115122535500		03-31-93	<10.000	<10.000	<5.0000	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000
14206950		03-01-93	<10.000	<10.000	<5.0000	<5.0000	<5.0000	<30.000	1.3800	<5.0000	<5.0000
14211550		03-14-93	<10.000	<10.000	<5.0000	<5.0000	<5.0000	<30.000	1.3600	<5.0000	<5.0000
453547122463000		10-26-92	<10.000	<10.000	<5.0000	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000

STATION	NUMBER	DATE	HEXA-CHLORO-BENZENE DISSOLV (UG/L)	HEXA-CHLORO-BUT-ADIENE DISSOLV (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE DISSOLV (UG/L)	HEXA-CHLORO-ETHANE DISSOLV (UG/L)	INDENO (1,2,3-CD) PYRENE DISSOLV (UG/L)	ISO-PHORONE DISSOLV (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE DISSOLV (UG/L)	N-NITRO-SODI-PHENYL-AMINE DISSOLV (UG/L)	2-NITRO-PHENOL DISSOLV (UG/L)
440313123091100		04-16-92	<5.0000	<5.0000	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000
		10-16-92	<5.0000	<5.0000	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000
14202000		04-27-93	<5.0000	<5.0000	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000
453115122535500		03-31-93	<5.0000	<5.0000	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000
14206950		03-01-93	<5.0000	<5.0000	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000
14211550		03-14-93	<5.0000	<5.0000	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000
453547122463000		10-26-92	<5.0000	<5.0000	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000

STATION	NUMBER	DATE	4-NITRO-PHENOL DISSOLV (UG/L)	NAPHTH-ALENE DISSOLV (UG/L)	NITRO-BENZENE DISSOLV (UG/L)	N-NITRO-SODI-METHYL-AMINE DISSOLV (UG/L)	PENTA-CHLORO-PHENOL DISSOLV (UG/L)	PHENAN-THRENE DISSOLV (UG/L)	PYRENE DISSOLV (UG/L)	1,2,4-TRI-CHLORO-BENZENE DISSOLV (UG/L)	2,4,6-TRI-CHLORO-PHENOL DISSOLV (UG/L)
440313123091100		04-16-92	<30.000	<5.0000	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000	<20.000
		10-16-92	<30.000	<5.0000	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000	<20.000
14202000		04-27-93	<30.000	<5.0000	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000	<20.000
453115122535500		03-31-93	<30.000	<5.0000	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000	<20.000
14206950		03-01-93	<30.000	<5.0000	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000	<20.000
14211550		03-14-93	<30.000	<5.0000	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000	<20.000
453547122463000		10-26-92	<30.000	<5.0000	<5.0000	<5.0000	<30.000	<5.0000	<5.0000	<5.0000	<20.000

Table 27. Concentrations of semi-volatile compounds associated with suspended sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93

[USGS laboratory schedule 8006; UG/L, micrograms per liter]

STATION NUMBER	STATION NAME	DATE	TIME	ACE-NAPHTH-ENE SUSP. (UG/L)	ACE-NAPHTH-YLENE SUSP. (UG/L)
440313123091100	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	04-16-92	1415	<5.0000	0.006000
	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	10-16-92	1350	<5.0000	<5.0000
14201300	ZOLLNER CREEK NEAR MT ANGEL, OR	06-01-93	1120	<5.0000	0.47000
14202000	PUDDING RIVER AT AURORA, OREG.	04-27-93	1450	<5.0000	<5.0000
453115122535500	BEAVERTON C AT 216TH AVE NEAR ORENCO, OR	03-31-93	1815	<5.0000	<5.0000
14206950	FANNO CREEK AT DURHAM, OR	03-01-93	1835	<5.0000	0.97000
14211550	JOHNSON CREEK AT MILWAUKIE,OREG.	03-14-93	1750	<5.0000	1.0340
453547122463000	WILLAMETTE RIVER AT LINNTON, OR	10-26-92	1005	<5.0000	<5.0000

STATION NUMBER	DATE	ANTHRA-CENE SUSP. (UG/L)	4-BROMO-PHENYL PHENYL ETHER SUSP. (UG/L)	BENZI-DINE SUSP. (UG/L)	BENZO(A) ANTHR ACENE SUSP. (UG/L)	BENZO (A) PYRENE SUSP. (UG/L)	BENZO(B) FLUOR-AN-THENE SUSP. (UG/L)	BENZO (GHI) PERYLENE SUSP. (UG/L)	BENZO(K) FLUOR-AN-THENE SUSP. (UG/L)	N-BUTYL BENZYL PHTHAL-ATE SUSP. (UG/L)
440313123091100	04-16-92	0.006000	<5.0000	<40.000	0.01600	<10.000	<10.000	<10.000	<10.000	<5.0000
	10-16-92	0.003000	<5.0000	1.9400	0.008000	<10.000	<10.000	<10.000	<10.000	<5.0000
14201300	06-01-93	0.46000	<5.0000	<40.000	<10.000	0.84000	0.95000	<10.000	0.25000	<5.0000
14202000	04-27-93	0.53000	<5.0000	0.99000	0.69000	<10.000	<10.000	<10.000	<10.000	1.3600
453115122535500	03-31-93	0.54500	<5.0000	8.2200	0.72200	1.1000	1.4200	<10.000	1.6500	<5.0000
14206950	03-01-93	0.54000	<5.0000	<40.000	0.75000	1.0300	1.4000	<10.000	1.6000	<5.0000
14211550	03-14-93	0.63300	<5.0000	<40.000	0.96000	1.2000	1.7110	<10.000	1.8350	<5.0000
453547122463000	10-26-92	<5.0000	<5.0000	<40.000	<10.000	<10.000	<10.000	<10.000	<10.000	3.3110

STATION NUMBER	DATE	BIS (2-CHLORO-ETHOXY) METHANE SUSP. (UG/L)	BIS (2-CHLORO-ETHYL) ETHER SUSP. (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER SUSP. (UG/L)	2-CHLORO-NAPH-THALENE SUSP. (UG/L)	2-CHLORO-PHENOL SUSP. (UG/L)	4-CHLORO-PHENYL PHENYL ETHER SUSP. (UG/L)	4-CHLORO-3-METHYL PHENOL SUSP. (UG/L)	CHRY-SENE SUSP. (UG/L)	1,2-DI-PHENYL-HYDRA-ZINE SUSP. (UG/L)
440313123091100	04-16-92	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	0.03400	<5.0000
	10-16-92	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	0.01300	<5.0000
14201300	06-01-93	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	0.41000	<5.0000
14202000	04-27-93	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	0.60000	<5.0000
453115122535500	03-31-93	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	0.80000	<5.0000
14206950	03-01-93	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	0.84000	<5.0000
14211550	03-14-93	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000	1.2900	<5.0000
453547122463000	10-26-92	<5.0000	<5.0000	<5.0000	0.45100	<5.0000	<5.0000	<30.000	<10.000	<5.0000

Table 27. Concentrations of semi-volatile compounds associated with suspended sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93—Continued

STATION NUMBER	DATE	1,2-DI-CHLORO-BENZENE SUSP. (UG/L)	1,3-DI-CHLORO-BENZENE SUSP. (UG/L)	1,4-DI-CHLORO-BENZENE SUSP. (UG/L)	2,4-DI-CHLORO-PHENOL SUSP. (UG/L)	2,4-DI-NITRO PHENOL SUSP. (UG/L)	2,4-DI-NITRO-TOLUENE SUSP. (UG/L)	2,6-DI-NITRO-TOLUENE SUSP. (UG/L)	3,3'-DI-CHLORO-BENZI-DINE SUSP. (UG/L)	DI-N-BUTYL PHTHAL-ATE SUSP. (UG/L)
440313123091100	04-16-92	<5.0000	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	<5.0000
	10-16-92	<5.0000	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	0.09100
14201300	06-01-93	<5.0000	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	<5.0000
14202000	04-27-93	<5.0000	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	1.8000
453115122535500	03-31-93	<5.0000	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	<5.0000
14206950	03-01-93	<5.0000	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	2.4800
14211550	03-14-93	<5.0000	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	<5.0000
453547122463000	10-26-92	<5.0000	<5.0000	<5.0000	<5.0000	<20.000	<5.0000	<5.0000	<20.000	39.980

STATION NUMBER	DATE	DI-N-OCTYL PHT HALATE SUSP. (UG/L)	1,2,5,6 DIBENZO (AH)AN THRACENE SUSP. (UG/L)	DIETHYL PHTHAL-ATE SUSP. (UG/L)	DI-METHYL PHTHAL-ATE SUSP. (UG/L)	4,6-DINITRO 2-METHYL PHENOL SUSP. (UG/L)	BIS (2-ETHYL HEXYL) PHTHAL-ATE SUSP. (UG/L)	FLUOR-ANTHENE SUSP. (UG/L)	FLUOR-ENE SUSP. (UG/L)	HEXA-CHLORO-BENZENE SUSP. (UG/L)
440313123091100	04-16-92	<10.000	<10.000	<5.0000	<5.0000	<30.000	<5.0000	0.01500	0.004000	<5.0000
	10-16-92	<10.000	<10.000	<5.0000	<5.0000	<30.000	0.69000	0.004000	0.003000	<5.0000
14201300	06-01-93	<10.000	<10.000	<5.0000	<5.0000	<30.000	2.9000	1.7800	<5.0000	<5.0000
14202000	04-27-93	1.7700	<10.000	<5.0000	<5.0000	<30.000	4.3700	0.60000	<5.0000	<5.0000
453115122535500	03-31-93	<10.000	<10.000	<5.0000	<5.0000	<30.000	<5.0000	0.82000	<5.0000	<5.0000
14206950	03-01-93	1.8000	<10.000	<5.0000	<5.0000	<30.000	4.6000	0.86000	<5.0000	<5.0000
14211550	03-14-93	2.1020	<10.000	<5.0000	<5.0000	<30.000	11.180	1.4500	<5.0000	<5.0000
453547122463000	10-26-92	2.2600	<10.000	0.66000	<5.0000	<30.000	54.360	0.20400	<5.0000	<5.0000

STATION NUMBER	DATE	HEXA-CHLORO-BUT-ADIENE SUSP. (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE SUSP. (UG/L)	HEXA-CHLORO-ETHANE SUSP. (UG/L)	INDENO (1,2,3-CD) PYRENE SUSP. (UG/L)	ISO-PHORONE SUSP. (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE SUSP. (UG/L)	N-NITRO-SODI-PHENY-LAMINE SUSP. (UG/L)	2-NITRO-PHENOL SUSP. (UG/L)	4-NITRO-PHENOL SUSP. (UG/L)
440313123091100	04-16-92	<5.0000	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000
	10-16-92	<5.0000	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000
14201300	06-01-93	<5.0000	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000
14202000	04-27-93	<5.0000	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000
453115122535500	03-31-93	<5.0000	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000
14206950	03-01-93	<5.0000	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000
14211550	03-14-93	<5.0000	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000
453547122463000	10-26-92	<5.0000	<5.0000	<5.0000	<10.000	<5.0000	<5.0000	<5.0000	<5.0000	<30.000

Table 27. Concentrations of semi-volatile compounds associated with suspended sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93—Continued

STATION NUMBER	DATE	NAPHTH-ALENE SUSP. (UG/L)	NITRO-BENZENE SUSP. (UG/L)	N-NITRO-SODI-METHY-LAMINE SUSP. (UG/L)	PENTA-CHLORO-PHENOL SUSP. (UG/L)	PHENAN-THRENE SUSP. (UG/L)	PHENOL SUSP. (UG/L)	PYRENE SUSP. (UG/L)	1,2,4-TRI-CHLORO-BENZENE SUSP. (UG/L)	2,4,6-TRI-CHLORO-PHENOL SUSP. (UG/L)
440313123091100	04-16-92	0.01300	<5.0000	<5.0000	0.15300	0.01200	0.04000	0.01800	<5.0000	<20.000
	10-16-92	0.01000	<5.0000	<5.0000	0.08400	0.00900	0.01200	0.00500	<5.0000	<20.000
14201300	06-01-93	<5.0000	<5.0000	<5.0000	<30.000	0.87000	<5.0000	1.4400	<5.0000	<20.000
14202000	04-27-93	0.66000	<5.0000	<5.0000	<30.000	0.64000	1.7000	0.56000	<5.0000	<20.000
453115122535500	03-31-93	<5.0000	<5.0000	<5.0000	<30.000	0.82300	<5.0000	0.81000	<5.0000	<20.000
14206950	03-01-93	0.73000	<5.0000	<5.0000	<30.000	0.80000	1.7600	1.0000	<5.0000	<20.000
14211550	03-14-93	0.72000	<5.0000	<5.0000	<30.000	0.94000	1.7300	2.2300	<5.0000	<20.000
453547122463000	10-26-92	0.14200	<5.0000	<5.0000	<30.000	0.27000	<5.0000	0.20000	<5.0000	<20.000

Table 28. Concentrations of semi-volatile compounds associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992

[USGS laboratory schedule 2502; WS, wet sieved; DW, dry weight; BM, bed material; G/KG, grams per kilogram; UG/KG, micrograms per kilogram]

STATION NUMBER	STATION NAME	DATE	TIME	CARBON, ORGANIC SED, BM WS,<2MM DW, REC (G/KG)	CARBON, INORG, SED, BM WS,<2MM DW, REC (G/KG)	CARBON, ORG + INORG SED, BM WS,<2MM DW, REC (G/KG)
440313123091100	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	08-25-92	1230	18.000	0.40000	18.000
14165500	MCKENZIE RIVER NEAR COBURG,OREG.	08-25-92	1645	85.000	0.20000	85.000
443207123145500	WILLAMETTE RIVER NEAR CORVALLIS, OR	08-26-92	1030	18.000	<0.10000	18.000
443819123064000	CALAPOOIA RIVER AT MOUTH AT ALBANY, OR	08-26-92	1500	13.000	1.4000	14.000
444032123050600	MIDDLE FOURTH LAKE NEAR ALBANY, OR	09-01-92	1100	77.000	0.20000	77.000
444416123030800	SANTIAM RIVER NEAR JEFFERSON, OR	08-29-92	1000	3.0000	<0.10000	3.0000
445543123084400	RICKREALL CREEK NEAR RICKREALL, OR	08-28-92	1345	12.000	<0.10000	12.000
451320123041100	YAMHILL RIVER AT DAYTON, OR	08-27-92	1400	3.7000	<0.10000	3.7000
451705122575100	WILLAMETTE RIVER AT NEWBERG, OR	09-01-92	1600	11.000	<0.10000	11.000
452950122492900	BEAVERTON CREEK AT BEAVERTON, OR	08-23-92	1100	46.000	<0.10000	46.000
452221122362400	CLACKAMAS RIVER AT OREGON CITY, OR	08-24-92	1130	5.8000	0.30000	6.1000
452847122244500	JOHNSON CREEK AT GRESHAM, OR	08-21-92	1330	9.4000	0.60000	10.000
453547122463000	WILLAMETTE RIVER AT LINNTON, OR	09-09-92	1130	17.000	<0.10000	17.000
453205122223701	BEAVER CREEK NEAR TROUTDALE, OR	08-22-92	0945	8.4000	0.40000	8.8000

Table 28. Concentrations of semi-volatile compounds associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992—Continued

STATION NUMBER	DATE	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	ACENAPHTHENE SED, BM WS,<2MM DW, REC (UG/KG)	ACENAPHTHYLENE SED, BM WS,<2MM DW, REC (UG/KG)	ACRIDINE SED, BM WS,<2MM DW, REC (UG/KG)	C8-ALKYLPHENOL SED, BM WS,<2MM DW, REC (UG/KG)	ANTHRACENE SED, BM WS,<2MM DW, REC (UG/KG)	ANTHRAQUINONE SED, BM WS,<2MM DW, REC (UG/KG)	AZOBENZENE SED, BM WS,<2MM DW, REC (UG/KG)	2,2'-BIQUINOLINE SED, BM WS,<2MM DW, REC (UG/KG)
440313123091100	08-25-92	23.000	23.000	36.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
14165500	08-25-92	84.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
443207123145500	08-26-92	22.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
443819123064000	08-26-92	33.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
444032123050600	09-01-92	95.000	52.000	20.000	<50.000	<50.000	15.000	180.00	<50.000	<50.000
444416123030800	08-29-92	3.0000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
445543123084400	08-28-92	17.000	<50.000	<50.000	<50.000	<50.000	32.000	<50.000	30.000	<50.000
451320123041100	08-27-92	9.0000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
451705122575100	09-01-92	20.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
452950122492900	08-23-92	66.000	27.000	<50.000	83.000	<50.000	150.00	350.00	<50.000	<50.000
452221122362400	08-24-92	4.0000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
452847122244500	08-21-92	34.000	14.000	47.000	<50.000	<50.000	61.000	42.000	<50.000	<50.000
453547122463000	09-09-92	49.000	190.00	48.000	34.000	<50.000	300.00	60.000	<50.000	<50.000
453205122223701	08-22-92	37.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000

Table 28. Concentrations of semi-volatile compounds associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992—Continued

STATION NUMBER	DATE	2-CHLORO ETHOXY- METHANE SED, BM WS,<2MM DW, REC (UG/KG)	4-BROMO- PHENYL PHNYLETHER SED, BM WS,<2MM DW, REC (UG/KG)	BENZO(A) ANTHRA- CENE SED, BM WS,<2MM DW, REC (UG/KG)	BENZO(B) FLUOR- ANTHENE SED, BM WS,<2MM DW, REC (UG/KG)	BENZO(G HI)PERY LENE SED, BM WS,<2MM DW, REC (UG/KG)	BENZO(K) FLUOR- ANTHENE SED, BM WS,<2MM DW, REC (UG/KG)	BENZO(C) QUINOLINE BED MAT WS <2MM DRY WGT REC (UG/KG)	BENZO (A) PYRENE SED, BM WS,<2MM DW, REC (UG/KG)
440313123091100	08-25-92	<50.000	<50.000	100.00	73.000	110.00	70.000	<50.000	110.00
14165500	08-25-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
443207123145500	08-26-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
443819123064000	08-26-92	<50.000	<50.000	<50.000	39.000	<50.000	39.000	<50.000	33.000
444032123050600	09-01-92	<50.000	<50.000	26.000	<50.000	<50.000	<50.000	<50.000	<50.000
444416123030800	08-29-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
445543123084400	08-28-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
451320123041100	08-27-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
451705122575100	09-01-92	<50.000	<50.000	46.000	25.000	14.000	25.000	<50.000	26.000
452950122492900	08-23-92	<50.000	<50.000	880.00	780.00	590.00	820.00	<50.000	630.00
452221122362400	08-24-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
452847122244500	08-21-92	<50.000	<50.000	150.00	180.00	250.00	160.00	<50.000	210.00
453547122463000	09-09-92	<50.000	<50.000	1400.0	2600.0	1700.0	2500.0	<50.000	2700.0
453205122223701	08-22-92	<50.000	<50.000	28.000	34.000	55.000	53.000	<50.000	41.000

Table 28. Concentrations of semi-volatile compounds associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992—Continued

STATION NUMBER	DATE	BIS2ETHYL HEXYL-PH THALATE SED, BM WS,<2MM DW, REC (UG/KG)	BUTYL BENZYL- PHTHALATE SED, BM WS,<2MM DW, REC (UG/KG)	124-TRI CHLORO BENZENE SED, BM WS,<2MM DW, REC (UG/KG)	2CHLORO- PHENOL BED MAT WS <2MM DRY WGT REC (UG/KG)	2CHLORO- NAPTHAL ENE SED, BM WS,<2MM DW, REC (UG/KG)	4CHLORO PHENYL-PH ENYLETHER SED, BM WS,<2MM DW, REC (UG/KG)	CHRY- SENE SED, BM WS,<2MM DW, REC (UG/KG)	PENTACHL ORONITRO BENZENE SED, BM WS,<2MM DW, REC (UG/KG)
440313123091100	08-25-92	2100.0	380.00	<50.000	<50.000	<50.000	<50.000	180.00	<50.000
14165500	08-25-92	19.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
443207123145500	08-26-92	61.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
443819123064000	08-26-92	72.000	58.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
444032123050600	09-01-92	46.000	81.000	12.000	<50.000	<50.000	<50.000	54.000	<50.000
444416123030800	08-29-92	88.000	65.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
445543123084400	08-28-92	100.00	74.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
451320123041100	08-27-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
451705122575100	09-01-92	10.000	<50.000	<50.000	<50.000	<50.000	<50.000	45.000	<50.000
452950122492900	08-23-92	1100.0	780.00	<50.000	<50.000	<50.000	<50.000	1500.0	<50.000
452221122362400	08-24-92	64.000	48.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
452847122244500	08-21-92	74.000	54.000	<50.000	<50.000	<50.000	<50.000	210.00	<50.000
453547122463000	09-09-92	88.000	38.000	<50.000	<50.000	<50.000	<50.000	1900.0	<50.000
453205122223701	08-22-92	49.000	30.000	<50.000	<50.000	<50.000	<50.000	71.000	<50.000

Table 28. Concentrations of semi-volatile compounds associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992—Continued

STATION NUMBER	DATE	HEXA-CHLORO-BENZENE SED, BM WS,<2MM DW, REC (UG/KG)	1,2-DI CHLORO-BENZENE SED, BM WS,<2MM DW, REC (UG/KG)	1,3-DI CHLORO-BENZENE SED, BM WS,<2MM DW, REC (UG/KG)	1,4-DI CHLORO-BENZENE SED, BM WS,<2MM DW, REC (UG/KG)	2,4-DI-NITRO-TOLUENE SED, BM WS,<2MM DW, REC (UG/KG)	2,6-DI-NITRO-TOLUENE SED, BM WS,<2MM DW, REC (UG/KG)	3,5-DIMETHYL PHENOL SED, BM WS,<2MM DW, REC (UG/KG)	DIBENZO THIO-PHENE SED, BM WS,<2MM DW, REC (UG/KG)
440313123091100	08-25-92	<50.000	<50.000	<50.000	<50.000	<50.000	<500.00	<50.000	<50.000
14165500	08-25-92	<50.000	<50.000	<50.000	<50.000	<50.000	<500.00	<50.000	<50.000
443207123145500	08-26-92	<50.000	<50.000	<50.000	<50.000	<50.000	<500.00	<50.000	<50.000
443819123064000	08-26-92	<50.000	<50.000	<50.000	<50.000	<50.000	<500.00	<50.000	<50.000
444032123050600	09-01-92	130.00	<50.000	87.000	31.000	<50.000	<500.00	<50.000	<50.000
444416123030800	08-29-92	<50.000	<50.000	<50.000	<50.000	<50.000	<500.00	<50.000	<50.000
445543123084400	08-28-92	<50.000	<50.000	<50.000	<50.000	<50.000	<500.00	<50.000	<50.000
451320123041100	08-27-92	<50.000	<50.000	<50.000	<50.000	<50.000	<500.00	<50.000	<50.000
451705122575100	09-01-92	<50.000	<50.000	<50.000	<50.000	<50.000	<500.00	<50.000	<50.000
452950122492900	08-23-92	<50.000	<5.0000	<50.000	<50.000	<50.000	<500.00	<50.000	61.000
452221122362400	08-24-92	<50.000	<50.000	<50.000	<50.000	<50.000	<500.00	<50.000	<50.000
452847122244500	08-21-92	<50.000	<50.000	<50.000	<50.000	<50.000	<500.00	<50.000	33.000
453547122463000	09-09-92	<50.000	<50.000	<50.000	<50.000	<50.000	<500.00	<50.000	120.00
453205122223701	08-22-92	<50.000	<50.000	<50.000	<50.000	<50.000	<500.00	<50.000	<50.000

Table 28. Concentrations of semi-volatile compounds associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992—Continued

STATION NUMBER	DATE	DI-N-BUTYL-PHTHALATE SED, BM WS,<2MM DW, REC (UG/KG)	DIBENZO(AH)ANTHRACENE SED, BM WS,<2MM DW, REC (UG/KG)	DIETHYL PHTHALATE SED, BM WS,<2MM DW, REC (UG/KG)	DIMETHYL PHTHALATE SED, BM WS,<2MM DW, REC (UG/KG)	DI-N-OCTYL-PHTHALATE SED, BM WS,<2MM DW, REC (UG/KG)	2-ETHYL-NAPTHALENE SED BM WS <2MM DW REC (UG/KG)	FLUORANTHENE BED MAT WS <2MM DRY WGT REC (UG/KG)	9H-CARBAZOLE SED, BM WS,<2MM DW, REC (UG/KG)	9H-FLUORENE SED, BM WS,<2MM DW, REC (UG/KG)
440313123091100	08-25-92	150.00	<50.000	<50.000	<50.000	<50.000	15.000	150.00	<50.000	40.000
14165500	08-25-92	42.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
443207123145500	08-26-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
443819123064000	08-26-92	54.000	<50.000	18.000	<50.000	<50.000	<50.000	37.000	<50.000	<50.000
444032123050600	09-01-92	60.000	<50.000	10.000	9.0000	<50.000	15.000	180.00	<50.000	50.000
444416123030800	08-29-92	68.000	<50.000	21.000	<50.000	<50.000	<50.000	38.000	<50.000	<50.000
445543123084400	08-28-92	43.000	<50.000	22.000	<50.000	<50.000	<50.000	49.000	<50.000	<50.000
451320123041100	08-27-92	16.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
451705122575100	09-01-92	14.000	<50.000	<50.000	<50.000	<50.000	<50.000	62.000	<50.000	<50.000
452950122492900	08-23-92	26.000	200.00	<50.000	25.000	<50.000	<50.000	1700.0	150.00	55.000
452221122362400	08-24-92	42.000	<50.000	17.000	<50.000	<50.000	<50.000	31.000	<50.000	<50.000
452847122244500	08-21-92	54.000	66.000	17.000	<50.000	<50.000	10.000	240.00	26.000	25.000
453547122463000	09-09-92	31.000	510.00	11.000	<50.000	<50.000	14.000	2100.0	210.00	160.00
453205122223701	08-22-92	17.000	<50.000	<50.000	<50.000	<50.000	<50.000	70.000	<50.000	<50.000

Table 28. Concentrations of semi-volatile compounds associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992—Continued

STATION NUMBER	DATE	INDENO 123-CD PYRENE SED, BM WS,<2MM DW, REC (UG/KG)	ISO-QUINO-LINE SED, BM WS,<2MM DW, REC (UG/KG)	ISOPHOR ONE SED, BM WS,<2MM DW, REC (UG/KG)	1,2-DI-METHYLNA PTHALENE SED, BM WS,<2MM DW, REC (UG/KG)	1,6-DI-METHYLNA PTHALENE SED, BM WS,<2MM DW, REC (UG/KG)	1-METHYL 9H-FLU-ORENE SED, BM WS,<2MM DW, REC (UG/KG)	1-METHYL PHENAN-THRENE SED, BM WS,<2MM DW, REC (UG/KG)	1-METHYL PYRENE SED, BM WS,<2MM DW, REC (UG/KG)	2,3,6-TRI METHYLNA PTHALENE SED, BM WS,<2MM DW, REC (UG/KG)
440313123091100	08-25-92	27.000	<50.000	<50.000	<50.000	58.000	<50.000	64.000	31.000	61.000
14165500	08-25-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
443207123145500	08-26-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
443819123064000	08-26-92	45.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
444032123050600	09-01-92	<50.000	<50.000	<50.000	6.0000	45.000	<50.000	59.000	22.000	22.000
444416123030800	08-29-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
445543123084400	08-28-92	<50.000	<50.000	<50.000	<50.000	15.000	<50.000	<50.000	<50.000	<50.000
451320123041100	08-27-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
451705122575100	09-01-92	16.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
452950122492900	08-23-92	460.00	<50.000	<50.000	<50.000	<50.000	<50.000	120.00	400.00	<50.000
452221122362400	08-24-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
452847122244500	08-21-92	230.00	<50.000	<50.000	6.0000	16.000	22.000	44.000	51.000	24.000
453547122463000	09-09-92	1500.0	<50.000	<50.000	7.0000	36.000	25.000	84.000	150.00	<50.000
453205122223701	08-22-92	36.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000

Table 28. Concentrations of semi-volatile compounds associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992—Continued

STATION NUMBER	DATE	2,6-DIMETHYLNAPHTHALENE SED, BM WS,<2MM DW, REC (UG/KG)	2-METHYLANTHRACENE SED, BM WS,<2MM DW, REC (UG/KG)	45-METHYL ENEPHENANTHRENE SED, BM WS,<2MM DW, REC (UG/KG)	4-CHLORO 3-METHYL PHENOL SED, BM WS,<2MM DW, REC (UG/KG)	N-NITROSO DIPHENYL AMINE SED, BM WS,<2MM DW, REC (UG/KG)	N-NITRO SODI-N-PROPYLAMINE SED, BM WS,<2MM DW, REC (UG/KG)	NAPHTHALENE SED, BM WS,<2MM DW, REC (UG/KG)	NITROBENZENE SED, BM WS,<2MM DW, REC (UG/KG)	P-CRESOL SED, BM WS,<2MM DW, REC (UG/KG)
440313123091100	08-25-92	81.000	56.000	<50.000	<50.000	50.000	<50.000	220.00	<50.000	1700.0
14165500	08-25-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	2200.0
443207123145500	08-26-92	41.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	47.000
443819123064000	08-26-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<5.0000	<50.000	170.00
444032123050600	09-01-92	50.000	<50.000	40.000	<50.000	<50.000	<50.000	88.000	<50.000	97.000
444416123030800	08-29-92	12.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
445543123084400	08-28-92	19.000	<50.000	<50.000	<50.000	<50.000	<50.000	<5.0000	<50.000	24.000
451320123041100	08-27-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
451705122575100	09-01-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
452950122492900	08-23-92	<50.000	<50.000	140.00	<50.000	45.000	<50.000	<50.000	<50.000	29.000
452221122362400	08-24-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000
452847122244500	08-21-92	12.000	35.000	45.000	<50.000	<50.000	<50.000	11.000	<50.000	26.000
453547122463000	09-09-92	37.000	54.000	190.00	190.00	<50.000	<50.000	120.00	<50.000	62.000
453205122223701	08-22-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	52.000

Table 28. Concentrations of semi-volatile compounds associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992—Continued

STATION NUMBER	DATE	PENTA-CHLORO-ANISOLE SED, BM WS,<2MM DW, REC (UG/KG)	PHENANTHRENE SED, BM WS,<2MM DW, REC (UG/KG)	PHENANTHRIDINE SED, BM WS,<2MM DW, REC (UG/KG)	PHENOL SED, BM WS,<2MM DW, REC (UG/KG)	PYRENE SED, BM WS,<2MM DW, REC (UG/KG)	QUINOLINE SED, BM WS,<2MM DW, REC (UG/KG)	BIPHENYL 2FLUORO SURROGT SED, BM WS,<2MM DW, REC PERCENT	TERPHENYL D14-SURROGT SED, BM WS,<2MM DW, REC PERCENT	BENZENE NITROD5 SURROGT SED, BM WS,<2MM DW, REC PERCENT
440313123091100	08-25-92	<50.000	210.00	<50.000	110.00	200.00	<50.000	56.000	66.000	49.000
14165500	08-25-92	<50.000	21.000	<50.000	310.00	<50.000	<50.000	27.000	35.000	31.000
443207123145500	08-26-92	<50.000	<50.000	<50.000	14.000	<50.000	<50.000	69.000	99.000	66.000
443819123064000	08-26-92	<50.000	18.000	<50.000	15.000	42.000	<50.000	39.000	53.000	49.000
444032123050600	09-01-92	<50.000	210.00	<50.000	36.000	170.00	20.000	58.000	74.000	61.000
444416123030800	08-29-92	<50.000	<50.000	<50.000	26.000	44.000	<50.000	37.000	51.000	46.000
445543123084400	08-28-92	<50.000	27.000	<50.000	5.0000	54.000	<50.000	52.000	71.000	66.000
451320123041100	08-27-92	<50.000	<50.000	<50.000	<50.000	<50.000	<50.000	33.000	41.000	35.000
451705122575100	09-01-92	<50.000	<50.000	<50.000	<50.000	49.000	<50.000	35.000	40.000	36.000
452950122492900	08-23-92	<50.000	870.00	15.000	22.000	1500.0	<50.000	28.000	38.000	29.000
452221122362400	08-24-92	<50.000	<50.000	<50.000	<5.0000	36.000	<50.000	33.000	48.000	35.000
452847122244500	08-21-92	<50.000	170.00	<50.000	5.0000	300.00	<50.000	36.000	52.000	38.000
453547122463000	09-09-92	<50.000	1400.0	38.000	19.000	1900.0	<50.000	68.000	82.000	74.000
453205122223701	08-22-92	<50.000	37.000	<50.000	22.000	90.000	<50.000	34.000	40.000	34.000

Table 29. Concentrations of volatile organic compounds in whole water from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93

[USGS laboratory schedules 1392 and 1401; UG/L, micrograms per liter]

STATION NUMBER	STATION NAME	DATE	TIME	ACRO-LEIN TOTAL (UG/L)	ACRYLO-NITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)
440313123091100	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	04-16-92	1410	<20.000	<20.000	<0.20000
	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	10-16-92	1345	<20.000	<20.000	<0.20000
443207123145500	WILLAMETTE RIVER NEAR CORVALLIS, OR	08-24-93	1615	<20.000	<20.000	<0.20000
443138123120901	MUDDY CREEK NEAR PEORIA, OR	08-24-93	1300	<20.000	<20.000	<0.20000
451309123041501	PALMER C AT DAYTON, OR	09-07-93	1045	<20.000	<20.000	<0.20000
14201300	ZOLLNER CREEK NEAR MT ANGEL, OR	06-01-93	1115	<20.000	<20.000	<0.20000
	ZOLLNER CREEK NEAR MT ANGEL, OR	07-27-93	1015	<20.000	<20.000	<0.20000
14202000	PUDDING RIVER AT AURORA, OREG.	04-27-93	1445	<20.000	<20.000	<0.20000
453115122535500	BEAVERTON C AT 216TH AVE NEAR ORENCO, OR	03-31-93	1810	<20.000	<20.000	<0.20000
14206950	FANNO CREEK AT DURHAM, OR	03-01-93	1830	<20.000	<20.000	<0.20000
	FANNO CREEK AT DURHAM, OR	07-22-93	1000	<20.000	<20.000	<0.20000
14211550	JOHNSON CREEK AT MILWAUKIE,OREG.	03-14-93	1745	<20.000	<20.000	<0.20000
453547122463000	WILLAMETTE RIVER AT LINNTON, OR	10-26-92	1000	<20.000	<20.000	<0.20000

STATION NUMBER	DATE	BROMO-BENZENE TOTAL (UG/L)	BROMO-CHLORO-METHANE TOTAL (UG/L)	TRI-BROMO-METHANE TOTAL (UG/L)	1-CHLORO-2-METHYL-BENZENE TOTAL (UG/L)	1-CHLORO-4-METHYL-BENZENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	DI-BROMO-CHLORO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)
440313123091100	04-16-92	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
	10-16-92	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
443207123145500	08-24-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
443138123120901	08-24-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
451309123041501	09-07-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
14201300	06-01-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
	07-27-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
14202000	04-27-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
453115122535500	03-31-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
14206950	03-01-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
	07-22-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
14211550	03-14-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
453547122463000	10-26-92	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000

Table 29. Concentrations of volatile organic compounds in whole water from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93—Continued

STATION NUMBER	DATE	TRI-CHLORO-METHANE TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	CIS-1,2-DI-CHLORO-ETHENE TOTAL (UG/L)	CIS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYLENE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DIBROMO ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)
440313123091100	04-16-92	0.20000	<0.20000	0.40000	<0.20000	0.20000	0.20000	<0.20000	<0.20000	<0.20000	<0.20000
	10-16-92	0.20000	<0.20000	0.90000	<0.20000	0.30000	0.40000	<0.20000	<0.20000	<0.20000	<0.20000
443207123145500	08-24-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<5.0000	<0.20000	<0.20000
443138123120901	08-24-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<5.0000	<0.20000	<0.20000
451309123041501	09-07-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<5.0000	<0.20000	<0.20000
14201300	06-01-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
	07-27-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
14202000	04-27-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
453115122535500	03-31-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
14206950	03-01-93	<0.20000	<0.20000	0.60000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
	07-22-93	<0.20000	<0.20000	0.30000	<0.20000	<0.20000	<0.20000	<0.20000	<5.0000	<0.20000	<0.20000
14211550	03-14-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
453547122463000	10-26-92	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000

STATION NUMBER	DATE	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	1,1-DI-CHLORO-PROPENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	2,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,2-DIBROMO 3-CHLORO-PROPANE TOTAL (UG/L)	DI-BROMO-METHANE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRI-CHLORO-TRI-FLUORO-ETHANE TOTAL (UG/L)
440313123091100	04-16-92	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.50000
	10-16-92	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.50000
443207123145500	08-24-93	<5.0000	<5.0000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.50000
443138123120901	08-24-93	<5.0000	<5.0000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.50000
451309123041501	09-07-93	<5.0000	<5.0000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.50000
14201300	06-01-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.50000
	07-27-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.50000
14202000	04-27-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.50000
453115122535500	03-31-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.50000
14206950	03-01-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.50000
	07-22-93	<5.0000	<5.0000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.50000
14211550	03-14-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.50000
453547122463000	10-26-92	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.50000

Table 29. Concentrations of volatile organic compounds in whole water from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93—Continued

STATION NUMBER	DATE	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	ISO-PROPYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	2-METHOXY 2-METHYL PROPENE TOTAL (UG/L)	N-BUTYL BENZENE TOTAL (UG/L)	N-PROPYL-BENZENE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	1-METHYL-4-ISO-PROPYL-BENZENE TOTAL (UG/L)
440313123091100	04-16-92	<0.20000	<0.20000	<0.20000	<0.20000	0.80000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
	10-16-92	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
443207123145500	08-24-93	<0.20000	<5.0000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<5.0000	<0.20000
443138123120901	08-24-93	<0.20000	<5.0000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<5.0000	<0.20000
451309123041501	09-07-93	<0.20000	<5.0000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<5.0000	<0.20000
14201300	06-01-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
	07-27-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
14202000	04-27-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
453115122535500	03-31-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
14206950	03-01-93	<0.20000	<0.20000	<0.20000	<0.20000	0.30000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
	07-22-93	<0.20000	<5.0000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<5.0000	<0.20000
14211550	03-14-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000
453547122463000	10-26-92	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000

STATION NUMBER	DATE	SEC BUTYL-BENZENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2-TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,1,2-TETRA-CHLORO-ETHANE, TOTAL (UG/L)	1,2,3-TRI-CHLORO BENZENE TOTAL (UG/L)	1,2,3-TRI-CHLORO-PROPANE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	1,2,4-TRI-METHYL-BENZENE TOTAL (UG/L)
440313123091100	04-16-92	<0.20000	<0.20000	0.90000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
	10-16-92	<0.20000	<0.20000	0.70000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
443207123145500	08-24-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<5.0000	<0.20000
443138123120901	08-24-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<5.0000	<0.20000
451309123041501	09-07-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<5.0000	<0.20000
14201300	06-01-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
	07-27-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
14202000	04-27-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
453115122535500	03-31-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
14206950	03-01-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
	07-22-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<5.0000	<0.20000
14211550	03-14-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
453547122463000	10-26-92	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000

Table 29. Concentrations of volatile organic compounds in whole water from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93—Continued

STATION NUMBER	DATE	TRANS-1,2-DI-CHLORO-ETHYLENE TOTAL (UG/L)	1,3,5-TRI-METHYL-BENZENE TOTAL (UG/L)	TERT-BUTYL-BENZENE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL (UG/L)
440313123091100	04-16-92	<0.20000	<0.20000	<0.20000	1.8000	<0.20000	<0.20000	0.90000	<0.20000	<0.20000	<0.20000
	10-16-92	<0.20000	<0.20000	<0.20000	1.1000	<0.20000	<0.20000	1.3000	<0.20000	<0.20000	<0.20000
443207123145500	08-24-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
443138123120901	08-24-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
451309123041501	09-07-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
14201300	06-01-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
	07-27-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
14202000	04-27-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
453115122535500	03-31-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
14206950	03-01-93	<0.20000	<0.20000	<0.20000	0.30000	<0.20000	<0.20000	0.60000	<0.20000	<0.20000	<0.20000
	07-22-93	<0.20000	<0.20000	<0.20000	0.40000	<0.20000	<0.20000	0.20000	<0.20000	<0.20000	<0.20000
14211550	03-14-93	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
453547122463000	10-26-92	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000

Table 30. Concentrations of volatile organic compounds in whole water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

[USGS laboratory schedule 2090; UG/L, micrograms per liter]

STATION NUMBER	STATION NAME	DATE	TIME	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)
440402123063900	URBAN OUTFALL AT POLK ST. PARK AT EUGENE, OR	06-13-94	1210	<0.20000	<0.20000	<0.20000
14206298	BRONSON CREEK AT 185TH AVE NEAR ALOHA, OR	11-23-94	1030	<0.20000	<0.20000	<0.20000
453154122394200	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	05-31-94	1800	<0.20000	<0.20000	<0.20000
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-08-94	1800	<0.20000	<0.20000	<0.20000
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-30-94	0840	<0.20000	<0.20000	<0.20000

STATION NUMBER	DATE	METHYL-BROMIDE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	TRANS-1,2-DI-CHLORO-ETHENE TOTAL (UG/L)	2-METHOXY 2-METHYL PROPENE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE TOTAL (UG/L)	BROMO CHLORO-METHANE TOTAL (UG/L)
440402123063900	06-13-94	<0.20000	<0.20000	<0.20000	0.30000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
14206298	11-23-94	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
453154122394200	05-31-94	<0.20000	<0.20000	<0.20000	<0.20000	0.30000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
	11-08-94	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
	11-30-94	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000

Table 30. Concentrations of volatile organic compounds in whole water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	CIS-1,2-DI-CHLORO-ETHENE TOTAL (UG/L)	TRI-CHLORO-METHANE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	1,1-DI CHLORO-PRO-, PENE, TOTAL	BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)
440402123063900	06-13-94	0.80000	0.80000	0.80000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
14206298	11-23-94	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
453154122394200	05-31-94	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	1.5000	<0.20000	<0.20000	<0.20000	<0.20000
	11-08-94	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	1.0000	<0.20000	<0.20000	<0.20000	<0.20000
	11-30-94	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	0.30000	<0.20000	<0.20000	<0.20000	<0.20000

STATION NUMBER	DATE	DI-BROMO-METHANE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE TOTAL (UG/L)	DI-BROMO-CHLORO-METHANE TOTAL (UG/L)	1,2-DIBROMO ETHANE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)
440402123063900	06-13-94	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	0.40000	<0.20000	<0.20000	<0.20000	<0.20000
14206298	11-23-94	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
453154122394200	05-31-94	<0.20000	<0.20000	0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
	11-08-94	<0.20000	<0.20000	0.70000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
	11-30-94	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000

Table 30. Concentrations of volatile organic compounds in whole water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	1,1, 1,2- TETRA- CHLORO- ETHANE, TOTAL (UG/L)	ETHYL- BENZENE TOTAL (UG/L)	XYLENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	TRI- BROMO- METHANE TOTAL (UG/L)	ISO- PROPYL- BENZENE TOTAL (UG/L)	1,1, 2,2 TETRA- CHLORO- ETHANE, TOTAL (UG/L)	BROMO-, BENZENE TOTAL (UG/L)	1,2,3- TRI- CHLORO- PROPANE TOTAL (UG/L)
440402123063900	06-13-94	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
14206298	11-23-94	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
453154122394200	05-31-94	<0.20000	<0.20000	0.40000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
	11-08-94	<0.20000	<0.20000	0.60000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
	11-30-94	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000

STATION NUMBER	DATE	N-PROPY BENZENE TOTAL (UG/L)	1- CHLORO- 2- METHYL BENZENE TOTAL (UG/L)	TERT- BUTYL- BENZENE TOTAL (UG/L)	1,2,4- TRI- METHYL BENZENE TOTAL (UG/L)	SEC BUTYL- BENZENE TOTAL (UG/L)	1- METHYL 4-ISO- PROPYL- BENZENE TOTAL (UG/L)	1,3-DI- CHLORO- BENZENE TOTAL (UG/L)	1,4-DI- CHLORO- BENZENE TOTAL (UG/L)	N-BUTYL BENZENE TOTAL (UG/L)
440402123063900	06-13-94	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
14206298	11-23-94	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
453154122394200	05-31-94	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
	11-08-94	<0.20000	<0.20000	<0.20000	0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
	11-30-94	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000

Table 30. Concentrations of volatile organic compounds in whole water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DIBROMO 3-CHLORO-PROPANE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	1,2,3-TRI-CHLORO-BENZENE TOTAL (UG/L)	1-CHLORO-4-METHYL BENZENE TOTAL (UG/L)	TRI-CHLORO-TRI-FLUORO-ETHANE TOTAL (UG/L)	1,3,5-TRI-METHYL BENZENE TOTAL (UG/L)
440402123063900	06-13-94	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
14206298	11-23-94	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000
453154122394200	05-31-94	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	0.30000
	11-08-94	<0.20000	<1.0000	<0.20000	<0.20000	0.50000	<0.20000	<0.20000	<0.20000	<0.20000
	11-30-94	<0.20000	<1.0000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000	<0.20000

Table 31. Concentrations of dioxin associated with suspended sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992

[E = estimate; PG/KL, picograms per kiloliter]

STATION NUMBER	STATION NAME	DATE	TIME	TCDD (total) (PG/KL)	2,3,7,8-TCDD (PG/KL)	PeCDD (total) (PG/KL)	1,2,3,7,8-PeCDD (PG/KL)	HxCDD (total) (PG/KL)	1,2,3,4,7,8-HxCDD (PG/KL)	1,2,3,6,7,8-HxCDD (PG/KL)	1,2,3,7,8,9 HxCDD (PG/KL)	HpCDD (total) (PG/KL)	1,2,3,4,6,7,8-HpCDD (PG/KL)	OCDD (PG/KL)
440313123091100	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	04-16-92	1410	6,100	740	44,000	7,300	280,000	10,000	52,000	20,000	1,700,000	E910,000	E11,000,000

Table 32. Concentrations of dioxin associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992
[PG/G, picograms per gram]

STATION NUMBER	STATION NAME	DATE	TIME	TCDDs (TOTAL) (PG/G)	2,3,7,8-TCDD (PG/G)	PeCDDs (TOTAL) (PG/G)	1,2,3,7,8-PeCDD (PG/G)
440313123091100	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	08-25-92	1230	55	3.0	210	20
443207123145500	WILLAMETTE RIVER NEAR CORVALLIS, OR	08-26-92	1030	<2.4	<0.90	<2.2	<1.1
444032123050600	MIDDLE FOURTH LAKE NEAR ALBANY, OR	09-01-92	1100	16	<2.5	27	<4.2
451320123041100	YAMHILL RIVER AT DAYTON, OR	08-27-92	1400	<0.67	<0.49	<1.5	<0.98
451705122575100	WILLAMETTE RIVER AT NEWBERG, OR	09-01-92	1600	<1.5	<0.55	<2.2	<0.64
452950122492900	BEAVERTON CREEK AT BEAVERTON, OR	08-23-92	1100	9.3	<2.2	26	<5.8
453547122463000	WILLAMETTE RIVER AT LINNTON, OR	09-09-92	1130	<0.78	<0.78	<6.4	<1.2
453205122223700	BEAVER C NEAR TROUTDALE, OR	08-22-92	0945	<0.91	<0.91	<2.7	<1.2

STATION NUMBER	DATE	HxCDDs (TOTAL) (PG/G)	1,2,3,4,7,8-HxCDD (PG/G)	1,2,3,6,7,8-HxCDD (PG/G)	1,2,3,7,8,9-HxCDD (PG/G)	HpCDDs (TOTAL) (PG/G)	1,2,3,4,6,7,8-HpCDD (PG/G)	OCDD (PG/G)
440313123091100	08-25-92	1000	30	200	65	5200	3200	32000
443207123145500	08-26-92	<11	<1.2	<1.9	<0.84	33	16	120
444032123050600	09-01-92	280	<7.1	47	19	1700	880	8500
451320123041100	08-27-92	<3.0	<0.27	<0.93	<0.26	26	14	110
451705122575100	09-01-92	<6.1	<0.34	<1.0	<0.58	25	13	98
452950122492900	08-23-92	190	<8.9	38	17	1500	800	6100
453547122463000	09-09-92	38	<1.6	<7.3	<2.7	280	130	1300
453205122223700	08-22-92	35	<2.1	8.2	<3.9	260	160	1400

Table 33. Concentrations of furans associated with suspended sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992

[E = estimate; PG/KL, picograms per kiloliter]

STATION NUMBER	STATION NAME	DATE	TIME	TCDF (TOTAL) (PG/KL)	2,3,7, 8-TCDF (PG/KL)	PeCDF (TOTAL) (PG/KL)	1,2,3,7, 8-PeCDF (PG/KL)	2,3,4,7, 8-PeCDF (PG/KL)	HxCDF (TOTAL) (PG/KL)	1,2, 3,4,7, 8-HxCDF (PG/KL)	1,2, 3,6,7, 8-HxCDF (PG/KL)	2,3, 4,6,7, 8-HxCDF (PG/KL)
440313123091100	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	04-16-92	1410	47000	2500	58000	1900	5500	260000	6900	7700	18000

STATION NUMBER	DATE	1,2, 3,7,8, 9-HxCDF (PG/KL)	HpCDF (TOTAL) (PG/KL)	1,2,3, 4,6,7, 8-HpCDF (PG/KL)	1,2,3, 4,7,8, 9-HpCDF (PG/KL)	OCDF (PG/KL)
440313123091100	04-16-92	430000	160000	9600	E410000	

Table 34. Concentrations of furans associated with bed sediment from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992
[PG/G, picograms per gram]

STATION NUMBER	STATION NAME	DATE	TIME	TCDFs (TOTAL) (PG/G)	2,3,7, 8-TCDF (PG/G)	PeCDFs (TOTAL) (PG/G)	1,2,3,7, 8-PeCDF (PG/G)
440313123091100	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	08-25-92	1230	170	8.7	510	<6.3
443207123145500	WILLAMETTE RIVER NEAR CORVALLIS, OR	08-26-92	1030	5.0	1.4	<0.94	<0.76
444032123050600	MIDDLE FOURTH LAKE NEAR ALBANY, OR	09-01-92	1100	240	21	110	<7.7
451320123041100	YAMHILL RIVER AT DAYTON, OR	08-27-92	1400	<0.72	<0.47	<0.86	<0.69
451705122575100	WILLAMETTE RIVER AT NEWBERG, OR	09-01-92	1600	2.8	<0.58	<0.77	<0.63
452950122492900	BEAVERTON CREEK AT BEAVERTON, OR	08-23-92	1100	49	4.5	71	<2.2
453547122463000	WILLAMETTE RIVER AT LINNTON, OR	09-09-92	1130	23	6.8	12	<4.0
453205122223700	BEAVER C NEAR TROUTDALE, OR	08-22-92	0945	4.7	<0.79	<4.1	<0.73

STATION NUMBER	DATE	2,3,4,7, 8-PeCDF (PG/G)	HxCDF (TOTAL) (PG/G)	1,2, 3,4,7, 8-HxCDF (PG/G)	1,2, 3,6,7, 8-HxCDF (PG/G)	2,3, 4,6,7, 8-HxCDF (PG/G)	1,2, 3,7,8, 9-HxCDF (PG/G)	HpCDF (TOTAL) (PG/G)	1,2,3, 4,6,7, 8-HpCDF (PG/G)	1,2,3, 4,7,8, 9-HpCDF (PG/G)	OCDF (PG/G)
440313123091100	08-25-92	22	1100	30	32	78	<7.7	2500	800	69	2600
443207123145500	08-26-92	<0.94	<3.2	<0.68	<0.58	<1.6	<0.72	<9.6	<3.3	<0.48	<9.6
444032123050600	09-01-92	<13	460	28	21	24	<7.3	1500	620	44	13000
451320123041100	08-27-92	<0.86	<3.5	<0.66	<0.49	<0.87	<0.70	<7.6	<2.3	<0.65	<7.5
451705122575100	09-01-92	<0.77	<4.0	<0.34	<0.30	<1.4	<0.36	<8.1	<2.7	<0.44	<9.9
452950122492900	08-23-92	<5.4	160	<9.1	<5.5	<10	<2.2	440	130	<10	310
453547122463000	09-09-92	<2.6	49	<8.5	<2.7	<5.1	<2.2	96	30	<5.1	150
453205122223700	08-22-92	<1.3	30	<1.4	<1.0	<3.1	<0.68	110	31	<2.3	140

Table 35. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93

[USGS laboratory schedule 2010; < , less than; E, estimate; UG/L, micrograms per liter]

STATION NUMBER	STATION NAME	DATE	TIME	ALA-CHLOR, WATER, DISS, REC, (UG/L)	METO-LACHLOR WATER DISSOLV (UG/L)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)
440313123091100	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	04-16-92	1415	<0.00200	<0.00400	<0.00400
	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	10-16-92	1205	<0.00200	<0.00400	<0.00400
	A-3 CHANNEL AT WALLIS AND 5TH ST AT EUGENE, OR	10-29-92	1005	<0.00200	0.02700	<0.00400
443207123145500	WILLAMETTE RIVER NEAR CORVALLIS, OR	08-24-93	1620	<0.00200	<0.00400	<0.00400
443138123120901	MUDDY CREEK NEAR PEORIA, OR	08-24-93	1305	<0.00200	0.006000	<0.00400
451309123041501	PALMER C AT DAYTON, OR	09-07-93	1050	<0.00200	0.01900	<0.00400
14201300	ZOLLNER CREEK NEAR MT ANGEL, OR	06-01-93	1120	<0.00200	1.4000	0.77000
	ZOLLNER CREEK NEAR MT ANGEL, OR	07-27-93	1020	<0.00200	0.86000	0.04500
14202000	PUDDING RIVER AT AURORA, OREG.	04-27-93	1450	<0.00200	0.008000	0.004000
453115122535500	BEAVERTON C AT 216TH AVE NEAR ORENCO, OR	03-31-93	1815	<0.00200	0.02700	<0.00400
14206950	FANNO CREEK AT DURHAM, OR	03-01-93	1835	<0.00200	0.01300	<0.00400
	FANNO CREEK AT DURHAM, OR	07-22-93	1005	<0.00200	0.02500	<0.00400
14211550	JOHNSON CREEK AT MILWAUKIE,OREG.	03-14-93	1750	<0.00200	0.02700	<0.00400
453547122463000	WILLAMETTE RIVER AT LINNTON, OR	10-26-92	1005	<0.00200	0.003000	0.01200

STATION NUMBER	DATE	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROPA-CHLOR, WATER, DISS, REC (UG/L)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	BUTYL-ATE, WATER, DISS, REC (UG/L)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)
440313123091100	04-16-92	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	10-16-92	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	10-29-92	<0.01800	<0.00700	0.04100	<0.00200	E0.02700	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
443207123145500	08-24-93	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
443138123120901	08-24-93	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
451309123041501	09-07-93	<0.01800	<0.00700	0.003000	<0.00200	E0.00400	<0.00300	0.001000	<0.00300	<0.00400	<0.00200
14201300	06-01-93	0.01100	0.004000	<0.00400	<0.00200	E0.57000	E0.16000	0.16000	<0.00300	<0.00400	<0.00200
	07-27-93	<0.01800	<0.00700	<0.00400	<0.00200	E0.02600	E0.18000	0.06700	<0.00300	<0.00400	<0.00200
14202000	04-27-93	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
453115122535500	03-31-93	<0.01800	<0.00700	<0.00400	<0.00200	E0.03300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
14206950	03-01-93	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	07-22-93	<0.01800	<0.00700	<0.00400	<0.00200	E0.02100	E0.01100	<0.00200	<0.00300	<0.00400	<0.00200
14211550	03-14-93	<0.01800	0.02400	<0.00400	<0.00200	<0.00300	E0.03800	<0.00200	<0.00300	<0.00400	<0.00200
453547122463000	10-26-92	<0.01800	<0.00700	0.004000	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200

Table 35. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93—Continued

STATION NUMBER	DATE	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	DI-ELDRIN DIS-SOLVED (UG/L)
440313123091100	04-16-92	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.05000	<0.05000
	10-16-92	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
	10-29-92	<0.00100	0.01200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	0.004000	<0.00100
443207123145500	08-24-93	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
443138123120901	08-24-93	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
451309123041501	09-07-93	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
14201300	06-01-93	<0.00100	<0.00200	<0.00400	<0.00400	0.01200	<0.00300	<0.01300	0.01500	<0.00100
	07-27-93	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
14202000	04-27-93	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	0.002000	<0.00100
453115122535500	03-31-93	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
14206950	03-01-93	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
	07-22-93	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	0.01000	<0.00100
14211550	03-14-93	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
453547122463000	10-26-92	0.002000	0.006000	<0.00400	<0.00400	0.007000	<0.00300	<0.01300	0.002000	<0.00100

STATION NUMBER	DATE	P,P' DDE DISSOLV (UG/L)	ALPHA HCH DIS-SOLVED (UG/L)	LINDANE DIS-SOLVED (UG/L)	CHLOR-PYRIFOS DIS-SOLVED (UG/L)	DI-AZINON, DIS-SOLVED (UG/L)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L)	FONOFOS WATER DISS REC (UG/L)	MALA-THION, DIS-SOLVED (UG/L)
440313123091100	04-16-92	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.05000	<0.00300	<0.00300	<0.00500
	10-16-92	0.002000	<0.00200	<0.00400	0.02200	<0.00200	<0.10000	<0.00300	0.03000	<0.00500
	10-29-92	<0.00600	<0.00200	<0.00400	0.08600	0.04400	<0.10000	<0.00300	<0.00300	<0.00500
443207123145500	08-24-93	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	0.01600
443138123120901	08-24-93	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
451309123041501	09-07-93	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
14201300	06-01-93	<0.00600	<0.00200	<0.00400	0.01000	0.03000	<0.01700	0.28000	0.10000	<0.00500
	07-27-93	<0.00600	<0.00200	0.02100	0.03200	1.2000	<0.01700	0.06600	0.01900	<0.00500
14202000	04-27-93	<0.00600	<0.00200	<0.00400	<0.00400	0.002000	<0.01700	<0.00300	--	0.01000
453115122535500	03-31-93	<0.00600	<0.00200	<0.00400	<0.00400	0.06300	<0.01700	<0.00300	<0.00300	<0.00500
14206950	03-01-93	<0.00600	<0.00200	<0.00400	0.002000	0.02500	<0.01700	<0.00300	<0.00300	0.02000
	07-22-93	<0.00600	<0.00200	<0.00400	0.02100	0.05700	<0.01700	<0.00300	<0.00300	<0.00500
14211550	03-14-93	<0.00600	<0.00200	<0.00400	<0.00400	0.01700	<0.01700	<0.00300	<0.00300	<0.00500
453547122463000	10-26-92	0.006000	<0.00200	<0.00400	<0.00400	<0.01000	<0.10000	<0.00300	<0.00300	<0.00500

Table 35. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1992–93—Continued

STATION NUMBER	DATE	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L)	PARA-THION, DIS-SOLVED (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	ATRA-ZINE, WATER, DISS, REC (UG/L)
440313123091100	04-16-92	<0.00100	<0.00200	<0.00600	<0.00200	<0.05000	<0.00500	<0.00200	<0.01000	0.16000
	10-16-92	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	0.06300	0.07000
	10-29-92	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.03900
443207123145500	08-24-93	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	<0.00100
443138123120901	08-24-93	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.01900
451309123041501	09-07-93	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.04300
14201300	06-01-93	E0.18000	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	2.7000
	07-27-93	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.33000
14202000	04-27-93	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.18000
453115122535500	03-31-93	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.01800
14206950	03-01-93	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	0.02500	0.02200
	07-22-93	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	0.04900	0.04000
14211550	03-14-93	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.02400
453547122463000	10-26-92	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	0.005000	0.01100

STATION NUMBER	DATE	CYANA-ZINE, WATER, DISS, REC (UG/L)	DESETHYL ATRA-ZINE, WATER, DISS, REC (UG/L)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L)	PRO-METON, WATER, DISS, REC (UG/L)	SI-MAZINE, WATER, DISS, REC (UG/L)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	DIAZ-INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT	TERBUTH YLAZINE SURROGT WAT FLT 0.7 U GF, REC PERCENT	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT
440313123091100	04-16-92	<0.00400	<0.05000	<0.00400	<0.00300	<0.00500	<0.00700	--	--	--
	10-16-92	<0.00400	<0.00200	0.03900	<0.00300	0.01000	<0.00700	111.00	102.00	110.00
	10-29-92	0.02100	<0.00200	0.22000	0.02800	<0.00500	<0.00700	85.300	96.500	110.00
443207123145500	08-24-93	<0.00400	<0.00200	<0.00400	<0.00300	<0.00500	<0.00700	70.000	97.800	90.000
443138123120901	08-24-93	<0.00400	<0.00200	<0.00400	<0.00300	0.01500	E0.04900	80.000	97.500	80.000
451309123041501	09-07-93	<0.00400	<0.00200	<0.00400	<0.00300	<0.00500	<0.00700	70.000	89.900	90.000
14201300	06-01-93	<0.00400	E0.27000	0.01100	0.005000	0.61000	<0.00700	122.00	116.00	85.000
	07-27-93	<0.00400	E0.02800	<0.00400	<0.00300	0.07600	<0.00700	100.00	100.00	100.00
14202000	04-27-93	<0.00400	E0.03600	0.006000	<0.00300	0.11000	E0.00900	75.600	99.800	89.000
453115122535500	03-31-93	<0.00400	<0.00200	<0.00400	0.02700	0.09400	<0.00700	102.00	86.500	97.000
14206950	03-01-93	<0.00400	<0.00200	<0.00400	0.03200	0.03000	<0.00700	95.600	107.00	92.000
	07-22-93	<0.00400	<0.00200	<0.00400	0.04200	0.13000	<0.00700	100.00	152.00	100.00
14211550	03-14-93	<0.00400	<0.00200	0.05400	0.02000	0.02500	<0.00700	115.00	141.00	110.00
453547122463000	10-26-92	<0.00400	<0.00200	0.006000	<0.00300	<0.00500	<0.00700	90.700	118.00	130.00

Table 36. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

[USGS laboratory schedule 2010; < , less than; E, estimate; UG/L, micrograms per liter]

STATION NUMBER	STATION NAME	DATE	TIME	ALA-CHLOR, WATER DISSOLV (UG/L)	METO-LACHLOR WATER DISSOLV (UG/L)	NAPROP-AMIDE WATER DISSOLV (UG/L)
433548123040600	COAST FORK WILLAMETTE R BL BIG RIVER NR LONDON, OR	05-20-94	1040	<0.00200	<0.00400	<0.00400
440045122585600	COAST FORK WILLAM AT SEAVY LOOP RD NR EUGENE, OR	05-19-94	1020	<0.00200	<0.00400	<0.00400
440402123063900	URBAN OUTFALL AT POLK ST. PARK AT EUGENE, OR	06-13-94	1210	<0.00200	0.003000	<0.00400
441310122095801	MACK CREEK NEAR BLUE RIVER, OR	05-27-94	1030	<0.00200	<0.00400	<0.00400
440707123041300	MCKENZIE RIVER NR EUGENE, OR	05-19-94	1450	<0.00200	<0.00400	<0.00400
442223123153703	LONG TOM R AT BUNDY BRIDGE NR MONROE, OR	05-19-94	0950	<0.00200	<0.00400	<0.00400
	LONG TOM R AT BUNDY BRIDGE NR MONROE, OR	11-01-94	1720	<0.00200	0.02000	<0.00400
442413123122500	LAKE CAMOUS CR AT PINE GROVE DR NR HARRISBURG, OR	05-19-94	1720	<0.00200	0.009000	<0.00400
443138123120901	MUDDY CREEK NEAR PEORIA, OR	05-26-94	1730	<0.00200	0.005000	<0.00400
	MUDDY CREEK NEAR PEORIA, OR	06-03-94	0930	<0.00200	0.003000	<0.00400
	MUDDY CREEK NEAR PEORIA, OR	06-20-94	1050	<0.00200	0.004000	<0.00400
	MUDDY CREEK NEAR PEORIA, OR	11-02-94	1010	<0.00200	0.64000	<0.00400
	MUDDY CREEK NEAR PEORIA, OR	11-06-94	1200	<0.00200	0.69000	<0.00400
	MUDDY CREEK NEAR PEORIA, OR	11-09-94	1430	<0.00200	0.41000	<0.00400
443045123273000	ROCK CREEK ABOVE GRIFFITH CREEK NR PHILOMATH, OR	05-18-94	1820	<0.00200	<0.00400	<0.00400
443321123155201	MARYS RIVER AT CORVALLIS, OR	05-18-94	1350	<0.00200	<0.00400	<0.00400
14173500	CALAPOOIA RIVER AT ALBANY, OR	05-26-94	1220	<0.00200	0.003000	<0.00400
	CALAPOOIA RIVER AT ALBANY, OR	11-01-94	1230	<0.00200	1.9000	<0.00400
444349123094000	LUCKIAMUTE R AT BUENA VISTA RD NR BUENA VISTA, OR	05-16-94	1720	<0.00200	<0.00400	<0.00400
444123122562200	THOMAS CREEK AT KELLY RD NR JEFFERSON, OR	05-16-94	1900	<0.00200	<0.00400	<0.00400
14189000	SANTIAM RIVER AT JEFFERSON, OR	05-17-94	1620	<0.00200	<0.00400	<0.00400

Table 36. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	PRON-AMIDE WATER, DISSOLV (UG/L)	PROPA-CHLOR WATER, DISSOLV (UG/L)	PRO-PANIL WATER, DISSOLV (UG/L)	BUTYL-WATER, DISSOLV (UG/L)	CAR-BARYL WATER, DISSOLV (UG/L)	CARBO-FURAN WATER, DISSOLV (UG/L)	EPTC WATER, DISSOLV (UG/L)	MOL-INATE WATER, DISSOLV (UG/L)	PEB-ULATE WATER, DISSOLV (UG/L)	THIO-BENCARB WATER, DISSOLV (UG/L)
433548123040600	05-20-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
440045122585600	05-19-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
440402123063900	06-13-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
441310122095801	05-27-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
440707123041300	05-19-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
442223123153703	05-19-94	<0.01800	<0.00700	<0.00400	<0.00200	E2.0000	<0.00300	0.008000	<0.00300	<0.00400	<0.00200
	11-01-94	E0.00600	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
442413123122500	05-19-94	0.02200	<0.00700	<0.00400	<0.00200	E0.00600	<0.00300	0.008000	<0.00300	<0.00400	<0.00200
443138123120901	05-26-94	0.01300	<0.00700	<0.00400	<0.00200	E0.00500	<0.00300	0.002000	<0.00300	<0.00400	<0.00200
	06-03-94	0.007000	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	06-20-94	0.005000	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	11-02-94	E0.00800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	11-06-94	E0.00500	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	11-09-94	0.03700	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
443045123273000	05-18-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
443321123155201	05-18-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
14173500	05-26-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	11-01-94	0.06500	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
444349123094000	05-16-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
444123122562200	05-16-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
14189000	05-17-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200

Table 36. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	TRIALATE WATER, DISSOLV (UG/L)	BENFLURALIN WATER, DISSOLV (UG/L)	ETHALFLURALIN WATER, DISSOLV (UG/L)	PENDIMETHALIN WATER, DISSOLV (UG/L)	TRIFLURALIN WATER, DISSOLV (UG/L)	2,6-DIETHYLANILINE WATER, DISSOLV (UG/L)	PROPARGITE WATER, DISSOLV (UG/L)	DCPA WATER, DISSOLV (UG/L)	DIELDRIN WATER, DISSOLV (UG/L)
433548123040600	05-20-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
440045122585600	05-19-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
440402123063900	06-13-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
441310122095801	05-27-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
440707123041300	05-19-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
442223123153703	05-19-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
	11-01-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
442413123122500	05-19-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
443138123120901	05-26-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
	06-03-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
	06-20-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
	11-02-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
	11-06-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
	11-09-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
443045123273000	05-18-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
443321123155201	05-18-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
14173500	05-26-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
	11-01-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
444349123094000	05-16-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
444123122562200	05-16-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
14189000	05-17-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100

Table 36. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	P,P' DDE WATER, DISSOLV (UG/L)	ALPHA HCH WATER, DISSOLV (UG/L)	LINDANE WATER, DISSOLV (UG/L)	CHLOR-PYRIFOS WATER, DISSOLV (UG/L)	DI-AZINON, WATER, DISSOLV (UG/L)	DISUL-FOTON WATER, DISSOLV (UG/L)	ETHO-PROP WATER, DISSOLV (UG/L)	FONOFOS WATER, DISSOLV (UG/L)	MALA-THION, WATER, DISSOLV (UG/L)
433548123040600	05-20-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
440045122585600	05-19-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
440402123063900	06-13-94	<0.00600	<0.00200	<0.00400	<0.00400	0.007000	<0.01700	<0.00300	<0.00300	<0.00500
441310122095801	05-27-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
440707123041300	05-19-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
442223123153703	05-19-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
	11-01-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	0.01600	<0.00500
442413123122500	05-19-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
443138123120901	05-26-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
	06-03-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
	06-20-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
	11-02-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
	11-06-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
	11-09-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
443045123273000	05-18-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
443321123155201	05-18-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
14173500	05-26-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
	11-01-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
444349123094000	05-16-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
444123122562200	05-16-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
14189000	05-17-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500

Table 36. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	METHYL AZIN-PHOS WATER, DISSOLV (UG/L)	METHYL PARA-THION WATER, DISSOLV (UG/L)	PARA-THION WATER, DISSOLV (UG/L)	PHORATE WATER, DISSOLV (UG/L)	TER-BUFOS WATER, DISSOLV (UG/L)	PER-METHRIN WATER, DISSOLV (UG/L)	LIN-URON WATER, DISSOLV (UG/L)	TEBU-THIURON WATER, DISSOLV (UG/L)	ATRA-ZINE WATER, DISSOLV (UG/L)
433548123040600	05-20-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	<0.00100
440045122585600	05-19-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.01000
440402123063900	06-13-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.01600
441310122095801	05-27-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	<0.00100
440707123041300	05-19-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	<0.00100
442223123153703	05-19-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.05600
	11-01-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.02600
442413123122500	05-19-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.28000
443138123120901	05-26-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.43000
	06-03-94	--	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.20000
	06-20-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.07700
	11-02-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.88000
	11-06-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.82000
	11-09-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.58000
443045123273000	05-18-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	<0.00100
443321123155201	05-18-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.03000
14173500	05-26-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.02500
	11-01-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.79000
444349123094000	05-16-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.05400
444123122562200	05-16-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.02200
14189000	05-17-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	<0.00100

Table 36. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	CYANAZINE, WATER, DISSOLV (UG/L)	DESETHYL ATRAZINE, WATER, DISSOLV (UG/L)	METRIBUZIN DISSOLV (UG/L)	PROMETON, WATER, DISSOLV (UG/L)	SIMAZINE, WATER, DISSOLV (UG/L)	TERBACIL WATER, DISSOLV (UG/L)	DIAZINON D10 SRG WATER, DISSOLV PERCENT	TERBUTHYLAZINE SURROGT WATER, DISSOLV PERCENT	HCH ALPHA D6 SRG WATER, DISSOLV PERCENT
433548123040600	05-20-94	<0.00400	<0.00200	<0.00400	<0.00300	<0.00500	<0.00700	98.00	113.00	101.00
440045122585600	05-19-94	<0.00400	<0.00200	<0.00400	<0.00300	<0.00500	<0.00700	103.00	122.00	106.00
440402123063900	06-13-94	<0.00400	<0.00200	<0.00400	0.01600	0.006000	<0.00700	113.00	108.00	118.00
441310122095801	05-27-94	<0.00400	<0.00200	<0.00400	<0.00300	<0.00500	<0.00700	92.00	93.00	107.00
440707123041300	05-19-94	<0.00400	<0.00200	<0.00400	<0.00300	<0.00500	E0.02600	97.00	117.00	98.00
442223123153703	05-19-94	<0.00400	E0.00600	<0.00400	<0.00300	0.01000	E0.07300	105.00	120.00	104.00
	11-01-94	<0.00400	E0.00300	<0.00400	E0.00500	0.12000	E0.11000	103.00	110.00	86.00
442413123122500	05-19-94	<0.00400	E0.01200	<0.00400	<0.00300	0.16000	E0.29000	94.00	109.00	91.00
443138123120901	05-26-94	<0.00400	E0.03400	<0.00400	<0.00300	0.63000	E0.03300	78.00	119.00	115.00
	06-03-94	<0.00400	E0.01900	<0.00400	<0.00300	0.28000	--	96.00	101.00	105.00
	06-20-94	<0.00400	E0.01400	<0.00400	<0.00300	0.47000	E0.02900	67.00	86.00	85.00
	11-02-94	<0.00400	E0.01800	<0.00400	<0.00300	1.2000	E0.05600	106.00	106.00	83.00
	11-06-94	<0.00400	E0.01500	0.11000	<0.00300	0.38000	E0.06100	98.00	108.00	86.00
	11-09-94	<0.00400	E0.01900	0.03800	<0.00300	0.19000	E0.08700	127.00	123.00	116.00
443045123273000	05-18-94	<0.00400	<0.00200	<0.00400	<0.00300	<0.00500	<0.00700	114.00	113.00	107.00
443321123155201	05-18-94	<0.00400	E0.00200	<0.00400	<0.00300	0.007000	<0.00700	124.00	119.00	99.00
14173500	05-26-94	<0.00400	E0.00300	<0.00400	<0.00300	0.006000	<0.00700	64.00	110.00	96.00
	11-01-94	<0.00400	E0.01700	0.06400	<0.00300	0.26000	E0.00600	108.00	114.00	89.00
444349123094000	05-16-94	<0.00400	<0.00200	<0.00400	<0.00300	0.004000	<0.00700	114.00	114.00	113.00
444123122562200	05-16-94	<0.00400	<0.00200	<0.00400	<0.00300	<0.00500	<0.00700	88.00	122.00	108.00
14189000	05-17-94	<0.00400	<0.00200	<0.00400	<0.00300	<0.00500	<0.00700	99.00	110.00	112.00

Table 36. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	STATION NAME	DATE	TIME	ALA-CHLOR, WATER DISSOLV (UG/L)	METO-LACHLOR WATER DISSOLV (UG/L)	NAPROP-AMIDE WATER DISSOLV (UG/L)
445547123065400	RICKREAL CREEK NR MOUTH NR SALEM, OR	05-26-94	1540	<0.00200	0.07100	<0.00400
14190970	PRINGLE C AT BUSH PARK AT SALEM, OR	11-23-94	1200	<0.00200	0.01100	E0.00800
	PRINGLE C AT BUSH PARK AT SALEM, OR	11-30-94	1530	<0.00200	0.01000	<0.00400
	PRINGLE C AT BUSH PARK AT SALEM, OR	11-30-94	1710	<0.00200	E0.00900	<0.00400
445037122573800	MILL CREEK AT DELANEY ROAD NR TURNER, OR	06-14-94	1140	<0.00200	0.08100	<0.00400
	MILL CREEK AT DELANEY ROAD NR TURNER, OR	10-31-94	1410	<0.00200	0.28000	<0.00400
	MILL CREEK AT DELANEY ROAD NR TURNER, OR	11-04-94	1120	<0.00200	0.37000	<0.00400
	MILL CREEK AT DELANEY ROAD NR TURNER, OR	11-04-94	1420	<0.00200	0.41000	<0.00400
14194150	SOUTH YAMHILL RIVER AT MCMINNVILLE, OR	05-17-94	1720	<0.00200	0.09100	0.16000
	SOUTH YAMHILL RIVER AT MCMINNVILLE, OR	11-02-94	1210	<0.00200	0.02600	<0.00400
451355123093600	NORTH YAMHILL RIVER AT HWY. 99E NR MCMINNVILLE, OR	05-17-94	1220	<0.00200	<0.00400	<0.00400
451602122564400	WILLAMETTE RIVER NR NEWBERG, OR	05-31-94	1400	<0.00200	0.005000	<0.00400
451502122524700	CHAMPOEG CREEK BELOW MISSION CR NR BUTTEVILLE, OR	05-26-94	1030	<0.00200	0.21000	0.01700
	CHAMPOEG CREEK BELOW MISSION CR NR BUTTEVILLE, OR	10-31-94	1300	<0.00200	3.3000	1.6000
14201300	ZOLLNER CREEK NEAR MT ANGEL, OR	05-25-94	1450	0.006000	1.4000	0.02900
	ZOLLNER CREEK NEAR MT ANGEL, OR	06-13-94	1120	<0.00200	0.59000	0.08300
	ZOLLNER CREEK NEAR MT ANGEL, OR	10-28-94	1320	0.01500	0.34000	E0.00800
	ZOLLNER CREEK NEAR MT ANGEL, OR	11-28-94	1400	E0.00700	0.10000	0.05000
14202000	PUDDING RIVER AT AURORA, OREG.	04-12-94	1110	<0.00200	0.01400	<0.00400
	PUDDING RIVER AT AURORA, OREG.	05-25-94	1100	<0.00200	0.05600	<0.00400
	PUDDING RIVER AT AURORA, OREG.	06-15-94	1145	<0.00200	0.01500	<0.00400
	PUDDING RIVER AT AURORA, OREG.	10-28-94	1710	<0.00200	0.15000	0.13000
	PUDDING RIVER AT AURORA, OREG.	10-29-94	1230	<0.00200	0.08400	0.06600
	PUDDING RIVER AT AURORA, OREG.	11-09-94	1300	<0.00200	0.08000	0.01600
	PUDDING RIVER AT AURORA, OREG.	11-29-94	1110	<0.00200	0.03600	<0.00400
451603122423301	MOLALLA R AT KNIGHTS BRIDGE NR CANBY, OR	05-25-94	1020	<0.00200	<0.00400	<0.00400
14206200	DAIRY CREEK AT RTE 8 NEAR HILLSBORO, OR	05-27-94	1640	<0.00200	0.007000	<0.00400
	DAIRY CREEK AT RTE 8 NEAR HILLSBORO, OR	12-01-94	1140	<0.00200	0.03100	0.05100

Table 36. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	PRON-AMIDE WATER, DISSOLV (UG/L)	PROPA-CHLOR WATER, DISSOLV (UG/L)	PRO-PANIL WATER, DISSOLV (UG/L)	BUTYL-WATER, DISSOLV (UG/L)	CAR-BARYL WATER, DISSOLV (UG/L)	CARBO-FURAN WATER, DISSOLV (UG/L)	EPTC WATER, DISSOLV (UG/L)	MOL-INATE WATER, DISSOLV (UG/L)	PEB-ULATE WATER, DISSOLV (UG/L)	THIO-BENCARB WATER, DISSOLV (UG/L)
445547123065400	05-26-94	<0.01800	<0.00700	<0.00400	<0.00200	E0.00500	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
14190970	11-23-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	E0.00200	<0.00300	<0.00400	<0.00200
	11-30-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	11-30-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
445037122573800	06-14-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	0.01900	<0.00300	<0.00400	<0.00200
	10-31-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	E0.68000	<0.00200	<0.00300	<0.00400	<0.00200
	11-04-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	E0.36000	0.006000	<0.00300	<0.00400	<0.00200
	11-04-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	E0.59000	0.007000	<0.00300	<0.00400	<0.00200
14194150	05-17-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	11-02-94	<0.01800	<0.00700	<0.00400	<0.00200	E0.00800	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
451355123093600	05-17-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
451602122564400	05-31-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
451502122524700	05-26-94	0.01500	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	10-31-94	0.02800	<0.00700	<0.00400	<0.00200	<0.00300	E0.11000	<0.00200	<0.00300	<0.00400	<0.00200
14201300	05-25-94	<0.01800	<0.00700	<0.00400	<0.00200	E0.02600	E0.38000	1.0000	<0.00300	<0.00400	<0.00200
	06-13-94	<0.01800	<0.00700	<0.00400	<0.00200	E0.01000	E0.11000	0.22000	<0.00300	<0.00400	<0.00200
	10-28-94	<0.01800	<0.00700	<0.00400	<0.00200	E0.01700	E9.0000	0.02300	<0.00300	<0.00400	<0.00200
	11-28-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	E0.06600	0.01300	<0.00300	<0.00400	<0.00200
14202000	04-12-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	05-25-94	0.004000	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	0.03900	<0.00300	<0.00400	<0.00200
	06-15-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	0.03200	<0.00300	<0.00400	<0.00200
	10-28-94	E0.00600	<0.00700	<0.00400	<0.00200	E0.00500	E0.73000	0.01000	<0.00300	<0.00400	<0.00200
	10-29-94	<0.01800	E0.00900	<0.00400	<0.00200	E0.00300	E0.32000	<0.00200	<0.00300	<0.00400	<0.00200
	11-09-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	E0.02600	<0.00200	<0.00300	<0.00400	<0.00200
	11-29-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	0.01300	<0.00300	<0.00400	<0.00200
451603122423301	05-25-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	0.002000	<0.00300	<0.00400	<0.00200
14206200	05-27-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	0.005000	<0.00300	<0.00400	<0.00200
	12-01-94	0.09800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	E0.00500	<0.00300	<0.00400	<0.00200

Table 36. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	TRIALATE WATER, DISSOLV (UG/L)	BENFLURALIN WATER, DISSOLV (UG/L)	ETHALFLURALIN WATER, DISSOLV (UG/L)	PENDIMETHALIN WATER, DISSOLV (UG/L)	TRIFLURALIN WATER, DISSOLV (UG/L)	2,6-DIETHYLANILINE WATER, DISSOLV (UG/L)	PROPARGITE WATER, DISSOLV (UG/L)	DCPA WATER, DISSOLV (UG/L)	DIELDRIN WATER, DISSOLV (UG/L)
445547123065400	05-26-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
14190970	11-23-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
	11-30-94	<0.00100	<0.00200	<0.00400	<0.00400	E0.00600	<0.00300	<0.01300	<0.00200	<0.00100
	11-30-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	E0.00300	<0.00100
445037122573800	06-14-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	0.003000	<0.00200	<0.00100
	10-31-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	0.009000	<0.00200	<0.00100
	11-04-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
	11-04-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	0.009000	<0.00200	<0.00100
14194150	05-17-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
	11-02-94	0.01000	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
451355123093600	05-17-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
451602122564400	05-31-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
451502122524700	05-26-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	0.001000	<0.00100
	10-31-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
14201300	05-25-94	<0.00100	<0.00200	<0.00400	<0.00400	0.006000	<0.00300	<0.01300	0.003000	<0.00100
	06-13-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	0.01000	<0.00100
	10-28-94	<0.00100	<0.00200	<0.00400	0.05100	0.01800	<0.00300	<0.01300	E0.00200	<0.00100
	11-28-94	<0.00100	<0.00200	<0.00400	<0.00400	E0.00600	<0.00300	<0.01300	<0.00200	<0.00100
14202000	04-12-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	0.02900	<0.00100
	05-25-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	0.008000	<0.00100
	06-15-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	0.006000	<0.00100
	10-28-94	<0.00100	<0.00200	<0.00400	<0.00400	E0.00400	<0.00300	<0.01300	0.01100	<0.00100
	10-29-94	<0.00100	<0.00200	<0.00400	<0.00400	E0.00300	<0.00300	<0.01300	0.008000	<0.00100
	11-09-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	0.006000	<0.00100
	11-29-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	0.005000	<0.00100
451603122423301	05-25-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
14206200	05-27-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
	12-01-94	0.01100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100

Table 36. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	P,P' DDE WATER, DISSOLV (UG/L)	ALPHA HCH WATER, DISSOLV (UG/L)	LINDANE WATER, DISSOLV (UG/L)	CHLOR-PYRIFOS WATER, DISSOLV (UG/L)	DI-AZINON, WATER, DISSOLV (UG/L)	DISUL-FOTON WATER, DISSOLV (UG/L)	ETHO-PROP WATER, DISSOLV (UG/L)	FONOFOS WATER, DISSOLV (UG/L)	MALA-THION, WATER, DISSOLV (UG/L)
445547123065400	05-26-94	<0.00600	<0.00200	<0.00400	<0.00400	0.005000	<0.01700	<0.00300	<0.00300	<0.00500
14190970	11-23-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
	11-30-94	<0.00600	<0.00200	<0.00400	<0.02700	0.01200	<0.01700	<0.00300	<0.00300	<0.00500
	11-30-94	<0.00600	<0.00200	<0.00400	<0.00400	0.02100	<0.01700	<0.00300	<0.00300	<0.00500
445037122573800	06-14-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	0.004000	0.001000	<0.00500
	10-31-94	<0.00600	<0.00200	<0.00400	0.008000	<0.00200	<0.01700	3.1000	<0.00300	<0.00500
	11-04-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	1.7000	E0.00400	<0.00500
	11-04-94	<0.00600	<0.00200	<0.00400	0.007000	<0.00200	<0.01700	1.9000	E0.00400	<0.00500
14194150	05-17-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	0.14000	<0.00300	<0.00500
	11-02-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
451355123093600	05-17-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
451602122564400	05-31-94	<0.00600	<0.00200	<0.00400	<0.00400	0.005000	<0.01700	<0.00300	<0.00300	<0.00500
451502122524700	05-26-94	<0.00600	<0.00200	0.03800	<0.00400	<0.00200	<0.01700	0.005000	<0.00300	<0.00500
	10-31-94	E0.00200	<0.00200	0.03000	<0.00400	<0.00200	<0.01700	E0.00400	0.01500	<0.00500
14201300	05-25-94	<0.00600	<0.00200	<0.00400	0.005000	0.12000	<0.01700	0.01800	0.05100	<0.00500
	06-13-94	<0.00600	<0.00200	0.004000	0.03300	0.17000	<0.01700	0.11000	0.10000	<0.00500
	10-28-94	<0.00600	<0.00200	<0.00400	0.01100	0.01300	<0.01700	0.01600	0.04500	<0.00500
	11-28-94	<0.00600	<0.00200	<0.00400	0.02500	E0.00500	<0.01700	<0.00300	0.009000	<0.00500
14202000	04-12-94	<0.00600	<0.00200	<0.00400	<0.00400	0.005000	<0.01700	<0.00300	<0.00300	<0.00500
	05-25-94	<0.00600	<0.00200	<0.00400	<0.00400	0.004000	<0.01700	<0.00300	<0.00300	<0.00500
	06-15-94	<0.00600	<0.00200	<0.00400	<0.00400	0.004000	<0.01700	0.003000	0.003000	<0.00500
	10-28-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	E0.00600	0.01500	<0.00500
	10-29-94	<0.00600	<0.00200	<0.00400	E0.00500	<0.00200	<0.01700	E0.00600	E0.00500	<0.00500
	11-09-94	<0.00600	<0.00200	<0.00400	<0.00400	0.009000	<0.01700	<0.00300	<0.00300	<0.00500
	11-29-94	<0.00600	<0.00200	<0.00400	<0.00400	E0.00700	<0.01700	<0.00300	<0.00300	<0.00500
451603122423301	05-25-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
14206200	05-27-94	<0.00600	<0.00200	<0.00400	<0.00400	0.003000	<0.01700	<0.00300	<0.00300	<0.00500
	12-01-94	<0.00600	<0.00200	<0.00400	0.006000	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500

Table 36. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	METHYL AZIN-PHOS WATER, DISSOLV (UG/L)	METHYL PARA-THION WATER, DISSOLV (UG/L)	PARA-THION WATER, DISSOLV (UG/L)	PHORATE WATER, DISSOLV (UG/L)	TER-BUFOS WATER, DISSOLV (UG/L)	PER-METHRIN WATER, DISSOLV (UG/L)	LIN-URON WATER, DISSOLV (UG/L)	TEBU-THIURON WATER, DISSOLV (UG/L)	ATRA-ZINE WATER, DISSOLV (UG/L)
445547123065400	05-26-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.04600
14190970	11-23-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	0.03200	0.04200
	11-30-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	0.05800	0.07600
	11-30-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	0.05100	0.11000
445037122573800	06-14-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.02700
	10-31-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	E0.01000	1.3000
	11-04-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.50000
	11-04-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.63000
14194150	05-17-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.02600
	11-02-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.04300
451355123093600	05-17-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.01200
451602122564400	05-31-94	--	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.01200
451502122524700	05-26-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.15000
	10-31-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.12000
14201300	05-25-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	1.8000
	06-13-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	2.4000
	10-28-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	1.8000
	11-28-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.19000
14202000	04-12-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.25000
	05-25-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.11000
	06-15-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.06100
	10-28-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.24000
	10-29-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	E0.00600	0.09200
	11-09-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.16000
	11-29-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.06500
451603122423301	05-25-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.006000
14206200	05-27-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.04900
	12-01-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.75000

Table 36. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	CYANAZINE, WATER, DISSOLV (UG/L)	DESETHYL ATRAZINE, WATER, DISSOLV (UG/L)	METRIBUZIN DISSOLV (UG/L)	PROMETON, WATER, DISSOLV (UG/L)	SIMAZINE, WATER, DISSOLV (UG/L)	TERBACIL WATER, DISSOLV (UG/L)	DIAZINON D10 SRG WATER, DISSOLV PERCENT	TERBUTHYLAZINE SURROGT WATER, DISSOLV PERCENT	HCH ALPHA D6 SRG WATER, DISSOLV PERCENT
445547123065400	05-26-94	<0.00400	<0.00200	<0.00400	<0.00300	0.005000	E0.20000	58.00	101.00	90.00
14190970	11-23-94	<0.00400	E0.01100	<0.00400	0.01200	0.05400	<0.00700	115.00	119.00	106.00
	11-30-94	<0.00400	<0.00200	<0.00400	0.02200	0.06800	<0.00700	126.00	128.00	111.00
	11-30-94	<0.00400	E0.00600	<0.00400	0.02600	0.06700	<0.00700	126.00	126.00	115.00
445037122573800	06-14-94	<0.00400	E0.00600	<0.00400	<0.00300	0.01900	E0.09100	110.00	100.00	111.00
	10-31-94	<0.00400	E0.06100	E0.01100	0.009000	0.13000	E1.0000	102.00	109.00	84.00
	11-04-94	<0.00400	E0.03900	0.08400	<0.00300	0.28000	E0.70000	44.00	99.00	77.00
	11-04-94	<0.00400	E0.07300	0.08700	E0.00600	0.40000	E0.90000	48.00	98.00	78.00
14194150	05-17-94	<0.00400	E0.00200	<0.00400	<0.00300	0.02300	<0.00700	99.00	110.00	114.00
	11-02-94	<0.00400	E0.00300	<0.00400	<0.00300	0.02700	<0.00700	100.00	101.00	85.00
451355123093600	05-17-94	<0.00400	<0.00200	<0.00400	<0.00300	<0.00500	<0.00700	105.00	111.00	106.00
451602122564400	05-31-94	<0.00400	<0.00200	<0.00400	<0.00300	0.01200	--	124.00	124.00	129.00
451502122524700	05-26-94	<0.00400	E0.02200	<0.00400	<0.00300	0.23000	<0.00700	71.00	116.00	95.00
	10-31-94	<0.00400	E0.00500	<0.00400	<0.00300	1.6000	<0.00700	102.00	113.00	83.00
14201300	05-25-94	<0.00400	E0.03500	<0.00400	<0.00300	3.5000	E0.00800	58.00	102.00	89.00
	06-13-94	<0.00400	E0.06700	<0.00400	<0.00300	2.8000	E0.01100	80.00	102.00	83.00
	10-28-94	<0.00400	E0.04000	<0.00400	<0.00300	0.94000	E0.03100	100.00	111.00	100.00
	11-28-94	<0.02600	E0.04800	0.04700	<0.00300	0.12000	E0.01800	50.00	116.00	100.00
14202000	04-12-94	<0.00400	E0.01100	<0.00400	<0.00300	0.11000	<0.00700	117.00	118.00	113.00
	05-25-94	<0.00400	E0.00500	<0.00400	<0.00300	0.09300	E0.03700	56.00	101.00	92.00
	06-15-94	<0.00400	E0.00600	<0.00400	<0.00300	0.04500	<0.00700	87.00	96.00	95.00
	10-28-94	<0.00400	E0.00700	<0.00400	<0.00300	0.32000	E0.00800	100.00	108.00	100.00
	10-29-94	<0.00400	E0.00600	<0.00400	<0.00300	0.21000	E0.01100	100.00	106.00	100.00
	11-09-94	<0.00400	E0.01300	0.01100	<0.00300	0.10000	E0.00700	116.00	123.00	111.00
	11-29-94	<0.02500	E0.01600	0.01400	<0.00300	0.05000	<0.00700	50.00	117.00	100.00
451603122423301	05-25-94	<0.00400	<0.00200	<0.00400	<0.00300	0.004000	<0.00700	53.00	98.00	90.00
14206200	05-27-94	<0.00400	<0.00200	<0.00400	<0.00300	<0.00500	<0.00700	119.00	110.00	115.00
	12-01-94	<0.00400	E0.02800	0.01400	E0.00700	0.18000	E0.01400	104.00	104.00	98.00

Table 36. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	STATION NAME	DATE	TIME	ALA-CHLOR, WATER DISSOLV (UG/L)	METO-LACHLOR WATER DISSOLV (UG/L)	NAPROP-AMIDE WATER DISSOLV (UG/L)
14206298	BRONSON CREEK AT 185TH AVE NEAR ALOHA, OR	05-27-94	1100	<0.00200	<0.00400	<0.00400
	BRONSON CREEK AT 185TH AVE NEAR ALOHA, OR	11-23-94	1030	<0.00200	E0.00400	<0.00400
14206950	FANNO CREEK AT DURHAM, OR	05-24-94	1420	<0.00200	0.007000	<0.00400
	FANNO CREEK AT DURHAM, OR	06-16-94	1040	<0.00200	0.01300	<0.00400
	FANNO CREEK AT DURHAM, OR	10-27-94	1620	<0.00200	0.01700	<0.00400
	FANNO CREEK AT DURHAM, OR	11-30-94	1010	<0.00200	E0.00800	<0.00400
14207500	TUALATIN RIVER AT WEST LINN,OREG.	05-25-94	1540	<0.00200	0.01500	<0.00400
	TUALATIN RIVER AT WEST LINN,OREG.	10-28-94	1610	<0.00200	0.02400	0.01300
	TUALATIN RIVER AT WEST LINN,OREG.	12-05-94	0910	<0.00200	0.07500	0.01400
452823122240900	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	05-24-94	1440	<0.00200	0.05800	0.03300
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	10-27-94	1640	<0.00200	0.32000	0.48000
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	10-28-94	1135	<0.00200	0.22000	0.25000
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	11-01-94	1100	<0.00200	0.19000	0.09700
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	11-03-94	1330	<0.00200	0.08900	0.03300
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	11-23-94	1410	<0.00200	0.05200	0.03000
453043122402200	COMMERCIAL/RESIDENTIAL RUNOFF AT HARBOR WAY, PORT, OR	06-17-94	2150	<0.00200	0.02000	<0.00400
14211720	WILLAMETTE RIVER AT PORTLAND,OREG.	05-10-94	0939	<0.00200	0.005000	<0.00400
	WILLAMETTE RIVER AT PORTLAND,OREG.	06-14-94	0949	<0.00200	0.004000	<0.00400
	WILLAMETTE RIVER AT PORTLAND,OREG.	10-25-94	1300	<0.00200	E0.00600	<0.00400
	WILLAMETTE RIVER AT PORTLAND,OREG.	10-29-94	1230	<0.00200	0.04900	0.02200
	WILLAMETTE RIVER AT PORTLAND,OREG.	11-03-94	0956	<0.00200	0.11000	0.02900
	WILLAMETTE RIVER AT PORTLAND,OREG.	12-02-94	1040	E0.00200	0.04800	E0.00600
453154122394200	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	05-31-94	1800	0.06000	0.03800	<0.00400
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-08-94	1800	<0.00200	0.02000	<0.00400
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-08-94	1950	<0.00200	0.01900	<0.00400
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-30-94	0840	<0.00200	E0.00900	<0.00400
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-30-94	1020	<0.00200	E0.00800	<0.00400
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	12-02-94	1020	<0.00200	<0.00400	<0.00400
14211805	WILLAMETTE R AB ST JOHNS BR AT PORTLAND,OREG.	05-23-94	0950	<0.00200	0.005000	<0.00400

Table 36. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	PRON-AMIDE WATER, DISSOLV (UG/L)	PROPA-CHLOR WATER, DISSOLV (UG/L)	PRO-PANIL WATER, DISSOLV (UG/L)	BUTYL-WATER, DISSOLV (UG/L)	CAR-BARYL WATER, DISSOLV (UG/L)	CARBO-FURAN WATER, DISSOLV (UG/L)	EPTC WATER, DISSOLV (UG/L)	MOL-INATE WATER, DISSOLV (UG/L)	PEB-ULATE WATER, DISSOLV (UG/L)	THIO-BENCARB WATER, DISSOLV (UG/L)
14206298	05-27-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	0.003000	<0.00300	<0.00400	<0.00200
	11-23-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
14206950	05-24-94	<0.01800	<0.00700	<0.00400	<0.00200	E0.00800	<0.00300	0.003000	<0.00300	<0.00400	<0.00200
	06-16-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	0.008000	<0.00300	<0.00400	<0.00200
	10-27-94	<0.01800	<0.00700	<0.00400	<0.00200	E0.24000	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	11-30-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
14207500	05-25-94	<0.01800	<0.00700	<0.00400	<0.00200	E0.01400	<0.00300	0.02100	<0.00300	<0.00400	<0.00200
	10-28-94	<0.01800	<0.00700	<0.00400	<0.00200	E0.13000	E0.03200	<0.00200	<0.00300	<0.00400	<0.00200
	12-05-94	0.02100	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
452823122240900	05-24-94	0.005000	<0.00700	<0.00400	<0.00200	E0.01000	E0.03500	<0.00200	<0.00300	<0.00400	<0.00200
	10-27-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	E0.00900	<0.00200	<0.00300	E0.00700	<0.00200
	10-28-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	11-01-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	11-03-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	11-23-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	E0.01200	<0.00200	<0.00300	<0.00400	<0.00200
453043122402200	06-17-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
14211720	05-10-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	0.005000	<0.00300	<0.00400	<0.00200
	06-14-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	0.005000	<0.00300	<0.00400	<0.00200
	10-25-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	10-29-94	<0.01800	<0.00700	<0.00400	<0.00200	E0.00600	E0.18000	<0.00200	<0.00300	<0.00400	<0.00200
	11-03-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	E0.08800	<0.00200	<0.00300	<0.00400	<0.00200
	12-02-94	0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	E0.00400	<0.00300	<0.00400	<0.00200
453154122394200	05-31-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	11-08-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	11-08-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	11-30-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	11-30-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
	12-02-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	<0.00200	<0.00300	<0.00400	<0.00200
14211805	05-23-94	<0.01800	<0.00700	<0.00400	<0.00200	<0.00300	<0.00300	0.006000	<0.00300	<0.00400	<0.00200

Table 36. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	TRIAL-LATE WATER, DISSOLV (UG/L)	BEN-FLUR-ALIN WATER, DISSOLV (UG/L)	ETHAL-FLUR-ALIN WATER, DISSOLV (UG/L)	PENDI-METH-ALIN WATER, DISSOLV (UG/L)	TRI-FLUR-ALIN WATER, DISSOLV (UG/L)	2,6-DI-ETHYL ANILINE WATER, DISSOLV (UG/L)	PRO-PARGITE WATER, DISSOLV (UG/L)	DCPA WATER, DISSOLV (UG/L)	DI-ELDRIN WATER, DISSOLV (UG/L)
14206298	05-27-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
	11-23-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
14206950	05-24-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	0.001000	<0.00100
	06-16-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	0.002000	<0.00100
	10-27-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	E0.00200	<0.00100
	11-30-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	E0.00300	<0.00100
14207500	05-25-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	0.001000	<0.00100
	10-28-94	<0.00100	<0.00200	<0.00400	E0.01100	E0.00500	<0.00300	<0.01300	E0.00100	<0.00100
	12-05-94	E0.00500	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
452823122240900	05-24-94	<0.00100	<0.00200	<0.00400	<0.00400	0.009000	<0.00300	<0.01300	0.001000	0.007000
	10-27-94	<0.00100	<0.00200	<0.00400	E0.01400	0.01400	<0.00300	<0.01300	<0.00200	0.02100
	10-28-94	<0.00100	<0.00200	<0.00400	<0.00400	E0.00900	<0.00300	<0.01300	<0.00200	0.01900
	11-01-94	<0.00100	<0.00200	<0.00400	<0.00400	E0.00500	<0.00300	<0.01300	<0.00200	0.01600
	11-03-94	<0.00100	<0.00200	<0.00400	<0.00400	E0.00300	<0.00300	<0.01300	<0.00200	0.01200
	11-23-94	<0.00100	<0.00200	<0.00400	<0.00400	E0.01000	<0.00300	<0.01300	<0.00200	<0.00100
453043122402200	06-17-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	0.004000	<0.00100
14211720	05-10-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
	06-14-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
	10-25-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
	10-29-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	0.004000	<0.00100
	11-03-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100
	12-02-94	E0.00800	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	E0.00100	<0.00100
453154122394200	05-31-94	<0.00100	<0.00200	<0.00400	<0.00400	0.006000	<0.00300	<0.01300	0.01200	<0.00100
	11-08-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	0.005000	<0.00100
	11-08-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	0.004000	<0.00100
	11-30-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	E0.00300	<0.00100
	11-30-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	E0.00400	<0.00100
	12-02-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	E0.00100	<0.00100
14211805	05-23-94	<0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.00300	<0.01300	<0.00200	<0.00100

Table 36. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	P,P' DDE WATER, DISSOLV (UG/L)	ALPHA HCH WATER, DISSOLV (UG/L)	LINDANE WATER, DISSOLV (UG/L)	CHLOR-PYRIFOS WATER, DISSOLV (UG/L)	DI-AZINON, WATER, DISSOLV (UG/L)	DISUL-FOTON WATER, DISSOLV (UG/L)	ETHO-PROP WATER, DISSOLV (UG/L)	FONOFOS WATER, DISSOLV (UG/L)	MALA-THION, WATER, DISSOLV (UG/L)
14206298	05-27-94	<0.00600	<0.00200	<0.00400	<0.00400	0.01200	<0.01700	<0.00300	<0.00300	<0.00500
	11-23-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
14206950	05-24-94	<0.00600	<0.00200	<0.00400	0.01000	0.02900	<0.01700	<0.00300	<0.00300	<0.00500
	06-16-94	<0.00600	<0.00200	<0.00400	0.005000	0.09400	<0.01700	0.005000	<0.00300	<0.00500
	10-27-94	<0.00600	<0.00200	<0.00400	0.01600	0.06600	<0.01700	E0.00700	<0.00300	0.01900
	11-30-94	<0.00600	<0.00200	<0.00400	0.01400	0.01600	<0.01700	<0.00300	<0.00300	<0.00500
14207500	05-25-94	<0.00600	<0.00200	<0.00400	<0.00400	0.02000	<0.01700	0.005000	<0.00300	<0.00500
	10-28-94	<0.00600	<0.00200	<0.00400	0.007000	0.03100	<0.01700	0.01600	E0.00200	E0.00900
	12-05-94	<0.00600	<0.00200	<0.00400	<0.00400	E0.00500	<0.01700	<0.00300	<0.00300	<0.00500
452823122240900	05-24-94	<0.00600	<0.00200	<0.00400	0.04300	0.01700	<0.01700	<0.00300	<0.00300	<0.00500
	10-27-94	E0.00400	<0.00200	<0.00400	0.01000	0.02400	<0.01700	<0.00300	E0.00400	<0.00500
	10-28-94	E0.00300	<0.00200	<0.00400	0.008000	0.01000	<0.01700	E0.00500	E0.00300	<0.00500
	11-01-94	E0.00300	<0.00200	E0.00500	<0.00400	E0.00800	<0.01700	<0.00300	<0.00300	<0.00500
	11-03-94	E0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
	11-23-94	E0.00100	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	<0.00300	<0.00500
453043122402200	06-17-94	<0.00600	<0.00200	<0.00400	<0.00400	0.02400	<0.01700	<0.00300	<0.00300	<0.00500
14211720	05-10-94	<0.00600	<0.00200	<0.00400	<0.00400	0.006000	<0.01700	<0.00300	<0.00300	<0.00500
	06-14-94	<0.00600	<0.00200	<0.00400	<0.00400	0.009000	<0.01700	<0.00300	<0.00300	<0.00500
	10-25-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	<0.00300	E0.00200	<0.00500
	10-29-94	<0.00600	<0.00200	<0.00400	<0.00400	E0.00600	<0.01700	0.01500	<0.00300	<0.00500
	11-03-94	<0.00600	<0.00200	<0.00400	<0.00400	<0.00200	<0.01700	0.02300	E0.00500	<0.00500
	12-02-94	<0.00600	<0.00200	<0.00400	0.006000	<0.00200	<0.01700	E0.00500	E0.00500	<0.00500
453154122394200	05-31-94	<0.00600	<0.00200	<0.00400	<0.00400	0.07700	<0.01700	<0.00300	<0.00300	0.10000
	11-08-94	<0.00600	<0.00200	<0.00400	<0.00400	0.03500	<0.01700	<0.00300	0.03000	0.05600
	11-08-94	<0.00600	<0.00200	<0.00400	<0.00400	0.02900	<0.01700	<0.00300	0.03500	0.07600
	11-30-94	<0.00600	<0.00200	<0.00400	<0.16000	<0.11000	<0.01700	<0.00300	<0.00300	<0.00500
	11-30-94	<0.00600	<0.00200	<0.00400	<0.15000	<0.11000	<0.01700	<0.00300	<0.00300	<0.00500
	12-02-94	<0.00600	<0.00200	<0.00400	0.03700	0.03000	<0.01700	<0.00300	<0.00300	<0.00500
14211805	05-23-94	<0.00600	<0.00200	<0.00400	<0.00400	0.003000	<0.01700	0.002000	<0.00300	<0.00500

Table 36. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	METHYL AZIN-PHOS WATER, DISSOLV (UG/L)	METHYL PARA-THION WATER, DISSOLV (UG/L)	PARA-THION WATER, DISSOLV (UG/L)	PHORATE WATER, DISSOLV (UG/L)	TER-BUFOS WATER, DISSOLV (UG/L)	PER-METHRIN WATER, DISSOLV (UG/L)	LIN-URON WATER, DISSOLV (UG/L)	TEBU-THIURON WATER, DISSOLV (UG/L)	ATRA-ZINE WATER, DISSOLV (UG/L)
14206298	05-27-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.03000
	11-23-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	E0.00700	0.02200
14206950	05-24-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	0.01700	0.02000
	06-16-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	0.03200	0.02300
	10-27-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	0.12000	E0.01200
	11-30-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	0.07200	E0.01300
14207500	05-25-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	0.05200	0.04800
	10-28-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	0.03700	E0.01400
	12-05-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	E0.00700	0.16000
452823122240900	05-24-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.07400
	10-27-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	E0.00600	0.17000
	10-28-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.07200
	11-01-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.04700
	11-03-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.02600
	11-23-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.03800
453043122402200	06-17-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.02000
14211720	05-10-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.02000
	06-14-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.01200
	10-25-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	E0.00500
	10-29-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	E0.00700	0.02900
	11-03-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.13000
	12-02-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	E0.00300	0.18000
453154122394200	05-31-94	--	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	0.78000	<0.01000	0.08200
	11-08-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.02300
	11-08-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.01800
	11-30-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	<0.00100
	11-30-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	<0.00100
	12-02-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	<0.00100
14211805	05-23-94	<0.00100	<0.00200	<0.00600	<0.00200	<0.00700	<0.00500	<0.00200	<0.01000	0.02400

Table 36. Concentrations of pesticides in filtered water analyzed by gas chromatography/mass spectroscopy from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	CYANAZINE, WATER, DISSOLV (UG/L)	DESETHYL ATRAZINE, WATER, DISSOLV (UG/L)	METRIBUZIN DISSOLV (UG/L)	PROMETON, WATER, DISSOLV (UG/L)	SIMAZINE, WATER, DISSOLV (UG/L)	TERBACIL WATER, DISSOLV (UG/L)	DIAZINON D10 SRG WATER, DISSOLV PERCENT	TERBUTHYLAZINE SURROGT WATER, DISSOLV PERCENT	HCH ALPHA D6 SRG WATER, DISSOLV PERCENT
14206298	05-27-94	<0.00400	<0.00200	<0.00400	0.01000	0.04300	<0.00700	131.00	114.00	120.00
	11-23-94	<0.00400	E0.00600	<0.00400	0.01600	0.89000	<0.00700	115.00	119.00	109.00
14206950	05-24-94	<0.00400	E0.00300	<0.00400	0.06800	0.20000	<0.00700	59.00	125.00	92.00
	06-16-94	<0.00400	E0.00600	<0.00400	0.05200	0.14000	<0.00700	105.00	105.00	94.00
	10-27-94	<0.00400	E0.00400	<0.00400	0.06500	0.18000	<0.00700	100.00	98.00	100.00
	11-30-94	<0.00400	<0.00200	<0.00400	0.02600	0.09600	<0.00700	100.00	130.00	100.00
14207500	05-25-94	<0.00400	E0.00400	<0.00400	<0.00300	0.09600	<0.00700	60.00	105.00	96.00
	10-28-94	<0.00400	E0.00400	E0.01000	0.02400	0.11000	<0.00700	101.00	106.00	102.00
	12-05-94	<0.00400	E0.00800	<0.00400	E0.00600	0.18000	<0.00700	60.00	99.00	90.00
452823122240900	05-24-94	<0.00400	E0.00800	<0.00400	0.008000	0.20000	<0.00700	59.00	107.00	93.00
	10-27-94	<0.00400	E0.01200	<0.00400	0.01300	0.18000	E0.01600	107.00	103.00	98.00
	10-28-94	<0.00400	E0.01100	<0.00400	0.01000	0.09100	E0.01300	98.00	104.00	100.00
	11-01-94	<0.00400	E0.00500	<0.00400	0.009000	0.07800	E0.01000	97.00	97.00	79.00
	11-03-94	<0.00400	E0.00700	<0.00400	E0.00500	0.03200	E0.00600	96.00	104.00	84.00
	11-23-94	<0.00400	E0.01400	<0.00400	E0.00800	0.02400	<0.00700	118.00	120.00	111.00
453043122402200	06-17-94	<0.00400	<0.00200	<0.00400	<0.00300	0.06600	<0.00700	83.00	90.00	76.00
14211720	05-10-94	<0.00400	E0.00500	<0.00400	<0.00300	0.01000	<0.00700	131.00	109.00	97.00
	06-14-94	<0.00400	<0.00200	<0.00400	<0.00300	0.01600	<0.00700	96.00	100.00	96.00
	10-25-94	<0.00400	E0.00200	<0.00400	<0.00300	E0.00600	<0.00700	101.00	103.00	103.00
	10-29-94	<0.00400	E0.00400	<0.00400	<0.00300	0.06600	E0.01700	103.00	109.00	99.00
	11-03-94	<0.00400	E0.00400	<0.00400	<0.00300	0.07300	E0.02700	50.00	100.00	80.00
	12-02-94	<0.00400	E0.00600	0.02000	<0.00300	0.04300	E0.01000	60.00	106.00	90.00
453154122394200	05-31-94	<0.00400	<0.00200	0.41000	<0.00300	0.12000	--	109.00	--	98.00
	11-08-94	<0.00400	<0.00200	<0.00400	<0.00300	<0.00500	<0.00700	142.00	163.00	125.00
	11-08-94	<0.00400	<0.00200	<0.00400	<0.00300	<0.00500	<0.00700	149.00	142.00	129.00
	11-30-94	<0.00400	<0.00200	<0.00400	<0.00300	<0.00500	<0.00700	142.00	197.00	113.00
	11-30-94	<0.00400	<0.00200	<0.00400	<0.00300	<0.00500	<0.00700	153.00	191.00	114.00
	12-02-94	<0.00400	E0.02400	<0.00400	<0.00300	0.06700	<0.00700	114.00	129.00	98.00
14211805	05-23-94	<0.00400	<0.00200	<0.00400	<0.00300	0.02100	<0.00700	55.00	102.00	92.00

Table 37. Concentrations of pesticides in filtered water analyzed by high performance liquid chromatography from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1993

[USGS laboratory schedule 2051; **, not detected. This is considered an experimental analysis; UG/L, micrograms per liter, Examination of native-water data, spiked native-water quality-assurance data, and pesticide use information indicate a possibility of false negative results for a number of analytes. The minimum reporting level for the schedule is listed as 0.05 ug/L (see Appendix), however the minimum reporting level for each individual analyte may have been variable depending upon sample matrix effects and analytical variability. Chlorothalonil, DNOC, Dichlobenil, Esfenvalerate, and 1-Naphthol are selected for removal from schedule 2051 or for qualitative reporting]

STATION NUMBER	STATION NAME	DATE	TIME	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L)	BROMOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L)	DICHLOBENIL, WATER, FLTRD, GF 0.7U REC (UG/L)
443207123145500	WILLAMETTE RIVER NEAR CORVALLIS, OR	08-24-93	1615	**	**	**
451309123041501	PALMER C AT DAYTON, OR	09-07-93	1045	**	**	**
451320123041100	YAMHILL RIVER AT DAYTON, OR	09-07-93	1420	**	**	**
14201300	ZOLLNER CREEK NEAR MT ANGEL, OR	06-01-93	1120	**	**	**
	ZOLLNER CREEK NEAR MT ANGEL, OR	07-27-93	1015	**	**	**
14202000	PUDDING RIVER AT AURORA, OREG.	04-27-93	1445	**	**	**
453115122535500	BEAVERTON C AT 216TH AVE NEAR ORENCO, OR	03-31-93	1815	**	**	**
14206950	FANNO CREEK AT DURHAM, OR	07-22-93	1000	**	**	**

STATION NUMBER	DATE	ALDICARB SULFONE WAT,FLT GF 0.7U REC (UG/L)	ALDICARB, WATER, FLTRD, GF 0.7U REC (UG/L)	ALDICARB SULFOXIDE, WAT,FLT GF 0.7U REC (UG/L)	CARBARYL, WATER, FLTRD, GF 0.7U REC (UG/L)	CARBOFURAN, WATER, FLTRD, GF 0.7U REC (UG/L)	3HYDRXY CARBOFURAN WAT,FLT GF 0.7U REC (UG/L)	METHIOCARB, WATER, FLTRD, GF 0.7U REC (UG/L)	METHOMYL, WATER, FLTRD, GF 0.7U REC (UG/L)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L)	PROPHAM, WATER, FLTRD, GF 0.7U REC (UG/L)
443207123145500	08-24-93	**	**	**	**	**	**	**	**	**	**
451309123041501	09-07-93	**	**	**	**	**	**	**	**	**	**
451320123041100	09-07-93	**	**	**	**	**	**	**	**	**	**
14201300	06-01-93	**	**	**	**	**	**	**	**	**	**
	07-27-93	**	**	**	**	**	**	**	**	**	**
14202000	04-27-93	**	**	**	**	**	**	**	**	**	**
453115122535500	03-31-93	**	**	**	**	**	**	**	**	**	**
14206950	07-22-93	**	**	**	**	**	**	**	**	**	**

Table 37. Concentrations of pesticides in filtered water analyzed by high performance liquid chromatography from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1993—Continued

STATION NUMBER	DATE	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L)	2,4-D, DIS-SOLVED (UG/L)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L)	SILVEX, DIS-SOLVED (UG/L)	2,4,5-T DIS-SOLVED (UG/L)
443207123145500	08-24-93	**	**	**	**	**	**	**	**	**	**
451309123041501	09-07-93	**	**	**	**	**	**	**	**	**	**
451320123041100	09-07-93	**	**	**	**	**	**	**	**	**	**
14201300	06-01-93	**	**	**	**	**	**	**	**	**	**
	07-27-93	**	**	0.79000	**	**	**	**	**	**	**
14202000	04-27-93	**	**	**	**	**	**	**	**	**	**
453115122535500	03-31-93	**	**	**	**	**	**	**	**	**	**
14206950	07-22-93	**	**	0.08000	**	**	**	**	**	**	**

STATION NUMBER	DATE	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L)	OCRESOL 4,6-DINITRO WAT,FLT GF 0.7U REC (UG/L)	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L)	1-NAPH THOL, WATER, FLTRD, GF 0.7U REC (UG/L)	AMIBEN, WATER, FLTRD, GF 0.7U REC (UG/L)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L)	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L)
443207123145500	08-24-93	**	**	**	**	**	**	**	**	**	**
451309123041501	09-07-93	**	**	**	**	**	**	**	**	**	**
451320123041100	09-07-93	**	**	**	**	**	**	**	**	**	**
14201300	06-01-93	**	**	**	**	**	**	0.68000	**	**	**
	07-27-93	**	**	**	**	**	**	9.0000	**	**	**
14202000	04-27-93	**	**	**	**	**	**	**	**	**	**
453115122535500	03-31-93	**	**	**	**	**	**	**	**	**	**
14206950	07-22-93	**	**	**	**	**	**	0.06000	**	**	**

Table 37. Concentrations of pesticides in filtered water analyzed by high performance liquid chromatography from Phase I of the Willamette River Basin Water Quality Study, Oregon, 1993—Continued

STATION NUMBER	DATE	NEBURON, WATER, FLTRD, GF 0.7U REC (UG/L)	CHLOROTHALONIL, WAT,FLT GF 0.7U REC (UG/L)	ESFENVALERATE, WAT,FLT GF 0.7U REC (UG/L)	NORFLURAZON, WATER, FLTRD, GF 0.7U REC (UG/L)	CLOPYRALID, WATER, FLTRD, GF 0.7U REC (UG/L)	PICLORAM, WATER, FLTRD, GF 0.7U REC (UG/L)	TRICLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L)	BROMACIL, WATER, DISS, REC (UG/L)	BDMC, SURROG, WATER, UNFLTRD REC PERCENT
443207123145500	08-24-93	**	**	**	**	**	**	**	**	56.000
451309123041501	09-07-93	**	**	**	**	**	**	**	**	62.000
451320123041100	09-07-93	**	**	**	**	**	**	**	**	50.000
14201300	06-01-93	**	**	**	**	**	**	**	**	--
	07-27-93	**	**	**	**	**	**	0.27000	**	12.000
14202000	04-27-93	**	**	**	**	**	**	**	**	--
453115122535500	03-31-93	**	**	**	**	**	**	**	**	4.0000
14206950	07-22-93	**	**	**	**	**	**	0.18000	**	12.000

Table 38. Concentrations of pesticides in filtered water analyzed by high performance liquid chromatography from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

[USGS laboratory schedule 2051; E, estimate; **, not detected; UG/L, micrograms per liter. This is considered an experimental analysis. Examination of native-water data, spiked native-water quality-assurance data, and pesticide use information indicate a possibility of false negative results for a number of analytes. The minimum reporting level for the schedule is listed as 0.05 ug/L (see Appendix), however the minimum reporting level for each individual analyte may have been variable depending upon sample matrix effects and analytical variability. Chlorothalonil, DNOC, Dichlobenil, Esfenvalerate, and 1-Naphthol are selected for removal from schedule 2051 or for qualitative reporting.]

STATION NUMBER	STATION NAME	DATE	TIME	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L)	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L)
433548123040600	COAST FORK WILLAMETTE R BL BIG RIVER NR LONDON, OR	05-20-94	1040	**	**	**
440045122585600	COAST FORK WILLAM AT SEAVY LOOP RD NR EUGENE, OR	05-19-94	1020	**	**	**
440402123063900	URBAN OUTFALL AT POLK ST. PARK AT EUGENE, OR	06-13-94	1210	**	**	**
441310122095801	MACK CREEK NEAR BLUE RIVER, OR	05-27-94	1030	**	**	**
440707123041300	MCKENZIE RIVER NR EUGENE, OR	05-19-94	1450	**	**	**
442223123153703	LONG TOM R AT BUNDY BRIDGE NR MONROE, OR	05-19-94	0950	**	**	**
	LONG TOM R AT BUNDY BRIDGE NR MONROE, OR	11-01-94	1720	**	**	**
442413123122500	LAKE CAMOUS CR AT PINE GROVE DR NR HARRISBURG, OR	05-19-94	1720	**	**	**
443138123120901	MUDDY CREEK NEAR PEORIA, OR	05-26-94	1730	**	**	**
	MUDDY CREEK NEAR PEORIA, OR	06-03-94	0930	**	**	**
	MUDDY CREEK NEAR PEORIA, OR	06-20-94	1050	**	**	**
	MUDDY CREEK NEAR PEORIA, OR	11-02-94	1010	**	**	**
	MUDDY CREEK NEAR PEORIA, OR	11-06-94	1200	**	**	**
	MUDDY CREEK NEAR PEORIA, OR	11-09-94	1430	**	**	**
443045123273000	ROCK CREEK ABOVE GRIFFITH CREEK NR PHILOMATH, OR	05-18-94	1820	**	**	**
443321123155201	MARYS RIVER AT CORVALLIS, OR	05-18-94	1350	**	**	**
14173500	CALAPOOIA RIVER AT ALBANY, OR	05-26-94	1220	**	**	**
	CALAPOOIA RIVER AT ALBANY, OR	11-01-94	1230	**	**	**
444349123094000	LUCKIAMUTE R AT BUENA VISTA RD NR BUENA VISTA, OR	05-16-94	1720	**	**	**
444123122562200	THOMAS CREEK AT KELLY RD NR JEFFERSON, OR	05-16-94	1900	**	**	**
14189000	SANTIAM RIVER AT JEFFERSON, OR	05-17-94	1620	**	**	**

Table 38. Concentrations of pesticides in filtered water analyzed by high performance liquid chromatography from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L)	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L)	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L)
433548123040600	05-20-94	**	**	**	**	**	**	**	**	**	**
440045122585600	05-19-94	**	**	**	**	**	**	**	**	**	**
440402123063900	06-13-94	**	**	**	**	**	**	**	**	**	**
441310122095801	05-27-94	**	**	**	**	**	**	**	**	**	**
440707123041300	05-19-94	**	**	**	**	**	**	**	**	**	**
442223123153703	05-19-94	**	**	**	**	**	**	**	**	**	**
	11-01-94	**	**	**	**	**	**	**	**	**	**
442413123122500	05-19-94	**	**	**	**	**	**	**	**	**	**
443138123120901	05-26-94	**	**	**	**	**	**	**	**	**	**
	06-03-94	**	**	**	**	**	**	**	**	**	**
	06-20-94	**	**	**	**	**	**	**	**	0.07000	**
	11-02-94	**	**	**	**	**	**	**	**	**	**
	11-06-94	**	**	**	**	**	**	**	**	**	**
	11-09-94	**	**	**	**	**	**	**	**	**	**
443045123273000	05-18-94	**	**	**	**	**	**	**	**	**	**
443321123155201	05-18-94	**	**	**	**	**	**	**	**	**	**
14173500	05-26-94	**	**	**	**	**	**	**	**	**	**
	11-01-94	**	**	**	**	**	**	**	**	**	**
444349123094000	05-16-94	**	**	**	**	**	**	**	**	**	**
444123122562200	05-16-94	**	**	**	**	**	**	**	**	**	**
14189000	05-17-94	**	**	**	**	**	**	**	**	**	**

Table 38. Concentrations of pesticides in filtered water analyzed by high performance liquid chromatography from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L)	2,4-D, DIS-SOLVED (UG/L)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L)	SILVEX, DIS-SOLVED (UG/L)	2,4,5-T DIS-SOLVED (UG/L)
433548123040600	05-20-94	**	**	**	**	**	**	**	**	**	**
440045122585600	05-19-94	**	**	**	**	**	**	**	**	**	**
440402123063900	06-13-94	**	**	**	**	**	**	**	**	**	**
441310122095801	05-27-94	**	**	**	**	**	**	**	**	**	**
440707123041300	05-19-94	**	**	**	**	**	**	**	**	**	**
442223123153703	05-19-94	**	**	**	**	**	**	**	**	**	**
	11-01-94	**	**	**	**	**	**	**	**	**	**
442413123122500	05-19-94	**	**	0.20000	**	**	**	**	**	**	**
443138123120901	05-26-94	**	**	0.21000	**	**	**	**	**	**	**
	06-03-94	**	**	**	**	**	**	**	**	**	**
	06-20-94	**	**	**	**	**	**	**	**	**	**
	11-02-94	**	**	**	**	**	**	**	**	**	**
	11-06-94	**	**	**	**	**	**	**	**	**	**
	11-09-94	**	**	**	**	**	**	**	**	**	**
443045123273000	05-18-94	**	**	**	**	**	**	**	**	**	**
443321123155201	05-18-94	**	**	**	**	**	**	**	**	**	**
14173500	05-26-94	**	**	**	**	**	**	**	**	**	**
	11-01-94	**	**	**	**	**	**	**	**	**	**
444349123094000	05-16-94	**	**	**	**	**	**	**	**	**	**
444123122562200	05-16-94	**	**	**	**	**	**	**	**	**	**
14189000	05-17-94	**	**	**	**	**	**	**	**	**	**

Table 38. Concentrations of pesticides in filtered water analyzed by high performance liquid chromatography from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L)	OCRESOL 4,6-DINITRO WAT,FLT GF 0.7U REC (UG/L)	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L)	1-NAPH THOL, WATER, FLTRD, GF 0.7U REC (UG/L)	AMIBEN, WATER, FLTRD, GF 0.7U REC (UG/L)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L)	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L)
433548123040600	05-20-94	**	**	**	**	**	**	**	**	**	**
440045122585600	05-19-94	**	**	**	**	**	**	**	**	**	**
440402123063900	06-13-94	**	**	**	**	**	**	0.28000	**	**	**
441310122095801	05-27-94	**	**	**	**	**	**	**	**	**	**
440707123041300	05-19-94	**	**	**	**	**	**	**	**	**	**
442223123153703	05-19-94	**	**	**	**	**	**	**	**	**	**
	11-01-94	**	0.06000	**	**	**	**	0.12000	**	**	**
442413123122500	05-19-94	**	**	**	**	**	**	0.69000	**	**	**
443138123120901	05-26-94	**	**	**	**	**	**	0.52000	**	**	**
	06-03-94	**	**	**	**	**	**	0.10000	**	**	**
	06-20-94	**	**	**	**	**	**	0.26000	**	**	**
	11-02-94	**	**	**	**	**	**	E1.4000	**	**	**
	11-06-94	**	**	**	**	**	**	E4.2000	**	**	**
	11-09-94	**	**	**	**	**	**	E2.5000	**	**	**
443045123273000	05-18-94	**	**	**	**	**	**	**	**	**	**
443321123155201	05-18-94	**	**	**	**	**	**	**	**	**	**
14173500	05-26-94	**	**	**	**	**	**	**	**	**	**
	11-01-94	**	**	**	**	**	**	E1.9000	**	**	**
444349123094000	05-16-94	**	**	**	**	**	**	**	**	**	**
444123122562200	05-16-94	**	**	**	**	**	**	**	**	**	**
14189000	05-17-94	**	**	**	**	**	**	**	**	**	**

Table 38. Concentrations of pesticides in filtered water analyzed by high performance liquid chromatography from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	NEBURON, WATER, FLTRD, GF 0.7U REC (UG/L)	CHLOROTHALONIL, WAT,FLT GF 0.7U REC (UG/L)	ESFENVALERATE, WAT,FLT GF 0.7U REC (UG/L)	NORFLURAZON, WATER, FLTRD, GF 0.7U REC (UG/L)	CLOPYRALID, WATER, FLTRD, GF 0.7U REC (UG/L)	PICLORAM, WATER, FLTRD, GF 0.7U REC (UG/L)	TRICLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L)	BROMACIL, WATER, DISS, REC (UG/L)	BDMC, SURROG, WATER, UNFLTRD REC PERCENT
433548123040600	05-20-94	**	**	**	**	**	**	**	**	8.0000
440045122585600	05-19-94	**	**	**	**	**	**	**	**	20.000
440402123063900	06-13-94	**	**	**	**	**	**	**	**	--
441310122095801	05-27-94	**	**	**	**	**	**	**	**	90.000
440707123041300	05-19-94	**	**	**	**	**	**	**	**	12.000
442223123153703	05-19-94	**	**	**	**	**	**	**	**	<0.00000
	11-01-94	**	**	**	**	**	**	0.29000	**	89.000
442413123122500	05-19-94	**	**	**	**	**	**	**	**	30.000
443138123120901	05-26-94	**	**	**	**	**	**	**	0.20000	25.000
	06-03-94	**	**	**	**	**	**	**	**	6.0000
	06-20-94	**	**	**	**	**	**	**	**	88.000
	11-02-94	**	**	**	**	**	**	0.44000	**	45.000
	11-06-94	**	**	**	**	**	**	**	**	66.000
	11-09-94	**	**	**	**	**	**	**	**	65.000
443045123273000	05-18-94	**	**	**	**	**	**	**	**	44.000
443321123155201	05-18-94	**	**	**	**	**	**	**	**	52.000
14173500	05-26-94	**	**	**	**	**	**	**	**	38.000
	11-01-94	**	**	**	**	**	**	0.72000	**	38.000
444349123094000	05-16-94	**	**	**	**	**	**	**	**	38.000
444123122562200	05-16-94	**	**	**	**	**	**	**	**	E65.000
14189000	05-17-94	**	**	**	**	**	**	**	**	89.000

Table 38. Concentrations of pesticides in filtered water analyzed by high performance liquid chromatography from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	STATION NAME	DATE	TIME	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L)	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L)
445547123065400	RICKREAL CREEK NR MOUTH NR SALEM, OR	05-26-94	1540	**	**	**
14190970	PRINGLE C AT BUSH PARK AT SALEM, OR	11-23-94	1200	**	**	**
	PRINGLE C AT BUSH PARK AT SALEM, OR	11-30-94	1530	**	**	**
	PRINGLE C AT BUSH PARK AT SALEM, OR	11-30-94	1710	**	**	**
445037122573800	MILL CREEK AT DELANEY ROAD NR TURNER, OR	06-14-94	1140	**	**	**
	MILL CREEK AT DELANEY ROAD NR TURNER, OR	10-31-94	1410	**	**	**
	MILL CREEK AT DELANEY ROAD NR TURNER, OR	11-04-94	1120	**	**	**
	MILL CREEK AT DELANEY ROAD NR TURNER, OR	11-04-94	1420	**	**	**
14194150	SOUTH YAMHILL RIVER AT MCMINNVILLE, OR	05-17-94	1720	**	**	**
	SOUTH YAMHILL RIVER AT MCMINNVILLE, OR	11-02-94	1210	**	**	**
451355123093600	NORTH YAMHILL RIVER AT HWY. 99E NR MCMINNVILLE, OR	05-17-94	1220	**	**	**
451602122564400	WILLAMETTE RIVER NR NEWBERG, OR	05-31-94	1400	**	**	**
451502122524700	CHAMPOEG CREEK BELOW MISSION CR NR BUTTEVILLE, OR	05-26-94	1030	**	**	**
	CHAMPOEG CREEK BELOW MISSION CR NR BUTTEVILLE, OR	10-31-94	1300	**	**	**
14201300	ZOLLNER CREEK NEAR MT ANGEL, OR	05-25-94	1450	0.05000	**	**
	ZOLLNER CREEK NEAR MT ANGEL, OR	06-13-94	1120	**	**	**
	ZOLLNER CREEK NEAR MT ANGEL, OR	10-28-94	1320	**	0.11000	**
	ZOLLNER CREEK NEAR MT ANGEL, OR	11-28-94	1400	**	**	**
14202000	PUDDING RIVER AT AURORA, OREG.	04-12-94	1110	**	**	**
	PUDDING RIVER AT AURORA, OREG.	05-25-94	1100	**	**	**
	PUDDING RIVER AT AURORA, OREG.	06-15-94	1145	**	**	**
	PUDDING RIVER AT AURORA, OREG.	10-28-94	1710	**	**	**
	PUDDING RIVER AT AURORA, OREG.	10-29-94	1230	**	**	**
	PUDDING RIVER AT AURORA, OREG.	11-09-94	1300	**	**	**
	PUDDING RIVER AT AURORA, OREG.	11-29-94	1110	**	**	**
451603122423301	MOLALLA R AT KNIGHTS BRIDGE NR CANBY, OR	05-25-94	1020	**	**	**
14206200	DAIRY CREEK AT RTE 8 NEAR HILLSBORO, OR	05-27-94	1640	**	**	**
	DAIRY CREEK AT RTE 8 NEAR HILLSBORO, OR	12-01-94	1140	**	**	**

Table 38. Concentrations of pesticides in filtered water analyzed by high performance liquid chromatography from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L)	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L)	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L)
445547123065400	05-26-94	**	**	**	**	**	**	**	**	**	**
14190970	11-23-94	**	**	**	**	**	**	**	**	**	**
	11-30-94	**	**	**	**	**	**	**	**	**	**
	11-30-94	**	**	**	**	**	**	**	**	**	**
445037122573800	06-14-94	**	**	**	**	**	**	**	**	**	**
	10-31-94	**	**	**	**	**	**	**	**	**	**
	11-04-94	**	**	**	**	0.30000	**	**	**	**	**
	11-04-94	**	**	**	**	0.47000	**	**	**	**	**
14194150	05-17-94	**	**	**	**	**	**	**	**	**	**
	11-02-94	**	**	**	**	**	**	**	**	**	**
451355123093600	05-17-94	**	**	**	**	**	**	**	**	**	**
451602122564400	05-31-94	**	**	**	**	**	**	**	**	**	**
451502122524700	05-26-94	**	**	**	**	**	**	**	**	**	**
	10-31-94	**	**	**	**	**	**	**	**	**	**
14201300	05-25-94	**	**	**	**	0.28000	**	**	**	**	**
	06-13-94	**	**	**	**	**	**	**	**	**	**
	10-28-94	**	**	**	**	**	**	**	**	**	**
	11-28-94	**	**	**	**	**	**	**	**	**	**
14202000	04-12-94	**	**	**	**	**	**	**	**	**	**
	05-25-94	**	**	**	**	**	**	**	**	**	**
	06-15-94	**	**	**	**	**	**	**	**	**	**
	10-28-94	**	**	**	**	**	**	**	**	**	**
	10-29-94	**	**	**	**	**	**	**	**	**	**
	11-09-94	**	**	**	**	**	**	**	**	**	**
	11-29-94	**	**	**	**	**	**	**	**	**	**
451603122423301	05-25-94	**	**	**	**	**	**	**	**	**	**
14206200	05-27-94	**	**	**	**	**	**	**	**	**	**
	12-01-94	**	**	**	**	**	**	**	**	**	**

Table 38. Concentrations of pesticides in filtered water analyzed by high performance liquid chromatography from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L)	2,4-D, DIS-SOLVED (UG/L)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L)	SILVEX, DIS-SOLVED (UG/L)	2,4,5-T DIS-SOLVED (UG/L)
445547123065400	05-26-94	**	**	**	**	**	**	**	**	**	**
14190970	11-23-94	**	**	**	**	**	**	**	**	**	**
	11-30-94	**	**	**	**	**	**	**	**	**	**
	11-30-94	**	**	**	**	**	**	**	**	**	**
445037122573800	06-14-94	**	**	**	**	**	**	**	**	**	**
	10-31-94	**	**	**	**	**	**	**	**	**	**
	11-04-94	**	**	**	**	**	**	**	**	**	**
	11-04-94	**	**	**	**	**	**	**	**	**	**
14194150	05-17-94	**	**	**	**	**	**	**	**	**	**
	11-02-94	**	**	**	**	**	**	**	**	**	**
451355123093600	05-17-94	**	**	**	**	**	**	**	**	**	**
451602122564400	05-31-94	**	**	**	**	**	**	**	**	**	**
451502122524700	05-26-94	**	**	**	**	**	**	**	**	**	**
	10-31-94	**	0.08000	**	**	**	**	**	**	**	**
14201300	05-25-94	**	0.26000	**	**	**	**	**	**	**	**
	06-13-94	**	0.41000	0.05000	**	**	**	**	**	**	**
	10-28-94	**	**	0.27000	**	**	**	0.09000	**	**	**
	11-28-94	**	**	**	**	**	**	**	**	**	**
14202000	04-12-94	**	**	**	**	**	**	**	**	**	**
	05-25-94	**	**	**	**	**	**	**	**	**	**
	06-15-94	**	**	**	**	**	**	**	**	**	**
	10-28-94	**	**	**	**	**	**	**	**	**	**
	10-29-94	**	**	**	**	**	**	**	**	**	**
	11-09-94	**	**	**	**	**	**	**	**	**	**
	11-29-94	**	**	**	**	**	**	**	**	**	**
451603122423301	05-25-94	**	**	**	**	**	**	**	**	**	**
14206200	05-27-94	--	**	**	**	**	**	**	**	**	**
	12-01-94	**	**	**	**	**	**	**	**	**	**

Table 38. Concentrations of pesticides in filtered water analyzed by high performance liquid chromatography from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L)	OCRESOL 4,6-DINITRO WAT,FLT GF 0.7U REC (UG/L)	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L)	1-NAPH THOL, WATER, FLTRD, GF 0.7U REC (UG/L)	AMIBEN, WATER, FLTRD, GF 0.7U REC (UG/L)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L)	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L)
445547123065400	05-26-94	**	**	**	**	**	**	**	**	**	**
14190970	11-23-94	**	**	**	**	**	**	**	**	**	**
	11-30-94	**	**	**	**	**	**	**	**	**	**
	11-30-94	**	**	**	**	**	**	**	**	**	**
445037122573800	06-14-94	**	**	**	**	**	**	**	**	**	**
	10-31-94	**	**	E0.05000	**	**	**	0.17000	**	**	**
	11-04-94	**	**	**	**	**	**	0.45000	**	**	**
	11-04-94	**	**	**	**	**	**	0.96000	**	**	**
14194150	05-17-94	**	**	**	**	**	**	**	**	**	**
	11-02-94	**	**	**	**	**	**	0.05000	**	**	**
451355123093600	05-17-94	**	**	**	**	**	**	**	**	**	**
451602122564400	05-31-94	**	**	**	**	**	**	**	**	**	**
451502122524700	05-26-94	**	**	**	**	**	**	0.52000	**	**	**
	10-31-94	**	0.06000	**	**	**	**	0.58000	**	**	**
14201300	05-25-94	**	**	**	**	**	**	E3.9000	**	**	**
	06-13-94	**	**	**	**	**	**	E3.4000	**	**	**
	10-28-94	**	0.23000	**	**	**	**	E5.8000	**	**	**
	11-28-94	**	0.09000	**	**	**	**	E1.5000	**	**	**
14202000	04-12-94	**	**	**	**	**	**	0.06000	**	**	**
	05-25-94	**	**	**	**	**	**	0.08000	**	**	**
	06-15-94	**	**	**	**	**	**	0.06000	**	**	**
	10-28-94	**	**	**	**	**	**	0.87000	**	**	**
	10-29-94	**	**	**	**	**	**	0.43000	**	**	**
	11-09-94	**	**	**	**	**	**	**	**	**	**
	11-29-94	**	**	**	**	**	**	0.19000	**	**	**
451603122423301	05-25-94	**	**	**	**	**	**	**	**	**	**
14206200	05-27-94	**	**	**	**	**	**	0.17000	**	**	**
	12-01-94	**	**	**	**	**	**	0.94000	**	**	**

Table 38. Concentrations of pesticides in filtered water analyzed by high performance liquid chromatography from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L)	ESFEN-VAL-ERATE, WAT,FLT GF 0.7U REC (UG/L)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L)	TRI-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L)	BRO-MACIL, WATER, DISS, REC (UG/L)	BDMC, SURROG, WATER, UNFLTRD REC PERCENT
445547123065400	05-26-94	**	**	**	**	**	**	**	**	40.000
14190970	11-23-94	**	**	**	**	**	**	0.11000	**	79.000
	11-30-94	**	**	**	**	**	**	**	**	--
	11-30-94	**	**	**	**	**	**	**	**	56.000
445037122573800	06-14-94	**	**	**	**	**	**	**	**	35.000
	10-31-94	**	**	**	**	**	**	0.14000	**	56.000
	11-04-94	**	**	**	**	**	**	**	**	75.000
	11-04-94	**	**	**	**	**	**	**	**	85.000
14194150	05-17-94	**	**	**	**	**	**	**	**	E83.000
	11-02-94	**	**	**	**	**	**	**	**	51.000
451355123093600	05-17-94	**	**	**	**	**	**	**	**	113.00
451602122564400	05-31-94	**	**	**	**	**	**	**	**	16.000
451502122524700	05-26-94	**	**	**	**	**	**	**	**	6.0000
	10-31-94	**	**	**	**	**	**	**	**	47.000
14201300	05-25-94	**	**	**	**	**	**	**	**	17.000
	06-13-94	**	**	**	**	**	**	**	**	30.000
	10-28-94	**	**	**	**	**	**	**	**	54.000
	11-28-94	**	**	**	**	**	**	**	**	81.000
14202000	04-12-94	**	**	**	**	**	**	**	**	28.000
	05-25-94	**	**	**	**	**	**	**	**	42.000
	06-15-94	**	**	**	**	**	**	**	**	33.000
	10-28-94	**	**	**	**	**	**	**	**	73.000
	10-29-94	**	**	**	**	**	**	**	**	77.000
	11-09-94	**	**	**	**	**	**	**	**	70.000
	11-29-94	**	**	**	**	**	**	**	**	75.000
451603122423301	05-25-94	**	**	**	**	**	**	**	**	90.000
14206200	05-27-94	**	**	**	**	**	**	**	**	120.00
	12-01-94	**	**	**	**	**	**	0.14000	**	74.000

Table 38. Concentrations of pesticides in filtered water analyzed by high performance liquid chromatography from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	STATION NAME	DATE	TIME	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L)	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L)	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L)
14206298	BRONSON CREEK AT 185TH AVE NEAR ALOHA, OR	05-27-94	1100	**	**	**
	BRONSON CREEK AT 185TH AVE NEAR ALOHA, OR	11-23-94	1030	**	**	**
14206950	FANNO CREEK AT DURHAM, OR	05-24-94	1420	**	**	**
	FANNO CREEK AT DURHAM, OR	06-16-94	1040	**	**	**
	FANNO CREEK AT DURHAM, OR	10-27-94	1620	**	**	**
	FANNO CREEK AT DURHAM, OR	11-30-94	1010	**	**	**
14207500	TUALATIN RIVER AT WEST LINN,OREG.	05-25-94	1540	**	**	**
	TUALATIN RIVER AT WEST LINN,OREG.	10-28-94	1610	**	**	**
452823122240900	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	05-24-94	1440	**	**	0.42000
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	10-27-94	1640	**	**	**
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	10-28-94	1135	**	**	**
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	11-01-94	1100	**	**	**
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	11-03-94	1330	**	**	**
	JOHNSON CREEK AT PALMBLAD RD NR GRESHAM, OR	11-23-94	1410	**	**	**
453043122402200	COMM/RESIDENTIAL RUNOFF AT HARBOR WAY AT PORT, OR	06-17-94	2150	**	**	**
14211720	WILLAMETTE RIVER AT PORTLAND,OREG.	06-14-94	0949	**	**	**
	WILLAMETTE RIVER AT PORTLAND,OREG.	10-25-94	1300	**	**	**
	WILLAMETTE RIVER AT PORTLAND,OREG.	10-29-94	1230	**	**	**
	WILLAMETTE RIVER AT PORTLAND,OREG.	11-03-94	0956	**	**	**
453154122394200	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	05-31-94	1800	**	**	**
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-08-94	1800	**	**	**
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-08-94	1950	**	**	**
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-30-94	0840	**	**	**
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	11-30-94	1020	**	**	**
	TRANSPORTATION CORRIDOR AT SE 3RD @ PORTLAND, OR	12-02-94	1020	**	**	**
14211805	WILLAMETTE R AB ST JOHNS BR AT PORTLAND,OREG.	05-23-94	0950	**	**	**

Table 38. Concentrations of pesticides in filtered water analyzed by high performance liquid chromatography from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L)	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L)	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L)
14206298	05-27-94	**	**	**	**	**	**	**	**	**	**
	11-23-94	**	**	**	**	**	**	**	**	**	**
14206950	05-24-94	**	**	**	**	**	**	**	**	**	**
	06-16-94	**	**	**	**	**	**	**	**	**	**
	10-27-94	**	**	**	0.25000	**	**	**	**	**	**
	11-30-94	**	**	**	**	**	**	**	**	**	**
14207500	05-25-94	**	**	**	**	**	**	**	**	**	**
	10-28-94	**	**	**	0.07000	**	**	**	**	**	**
452823122240900	05-24-94	**	**	**	**	**	**	**	**	**	**
	10-27-94	**	**	**	**	**	**	**	**	**	**
	10-28-94	**	**	**	**	**	**	**	**	**	**
	11-01-94	**	**	**	**	**	**	**	**	**	**
	11-03-94	**	**	**	**	**	**	**	**	**	**
	11-23-94	**	**	**	**	**	**	**	**	**	**
453043122402200	06-17-94	**	**	**	**	**	**	**	**	**	**
14211720	06-14-94	**	**	**	**	**	**	**	**	**	**
	10-25-94	**	**	**	**	**	**	**	**	**	**
	10-29-94	**	**	**	**	**	**	**	**	**	**
	11-03-94	**	**	**	**	0.05000	**	**	**	**	**
453154122394200	05-31-94	**	**	**	**	**	**	**	**	**	**
	11-08-94	**	**	**	**	**	**	**	**	**	**
	11-08-94	**	**	**	**	**	**	**	**	**	**
	11-30-94	**	**	**	**	**	**	**	**	**	**
	11-30-94	**	**	**	**	**	**	**	**	**	**
	12-02-94	**	**	**	**	**	**	**	**	**	**
14211805	05-23-94	**	**	**	**	**	**	**	**	**	**

Table 38. Concentrations of pesticides in filtered water analyzed by high performance liquid chromatography from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L)	2,4-D, DIS-SOLVED (UG/L)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L)	SILVEX, DIS-SOLVED (UG/L)	2,4,5-T DIS-SOLVED (UG/L)
14206298	05-27-94	**	**	0.07000	**	**	**	**	**	**	**
	11-23-94	**	**	**	**	**	**	**	**	**	**
14206950	05-24-94	**	**	**	**	**	**	**	**	**	**
	06-16-94	**	**	**	**	**	**	**	**	**	**
	10-27-94	**	**	0.16000	**	**	**	**	**	**	**
	11-30-94	**	**	**	**	**	**	**	**	**	**
14207500	05-25-94	**	**	**	**	**	**	**	**	**	**
	10-28-94	**	**	0.23000	**	**	**	**	**	**	**
452823122240900	05-24-94	**	**	**	**	**	**	**	**	**	**
	10-27-94	**	**	0.13000	**	**	**	**	**	**	**
	10-28-94	**	**	**	**	**	**	**	**	**	**
	11-01-94	**	**	**	**	**	**	**	**	**	**
	11-03-94	**	**	**	**	**	**	**	**	**	**
	11-23-94	**	**	**	**	**	**	**	**	**	**
453043122402200	06-17-94	**	**	**	**	**	**	**	**	**	**
14211720	06-14-94	**	**	**	**	**	**	**	**	**	**
	10-25-94	**	**	**	**	**	**	**	**	**	**
	10-29-94	**	**	**	**	**	**	**	**	**	**
	11-03-94	**	**	**	**	**	**	**	**	**	**
453154122394200	05-31-94	**	**	**	**	**	**	**	**	**	**
	11-08-94	**	**	**	**	**	**	**	**	**	**
	11-08-94	**	**	**	**	**	**	**	**	**	**
	11-30-94	**	**	**	**	**	**	**	**	**	**
	11-30-94	**	**	**	**	**	**	**	**	**	**
	12-02-94	**	**	**	**	**	**	**	**	**	**
14211805	05-23-94	**	**	**	**	**	**	**	**	**	**

Table 38. Concentrations of pesticides in filtered water analyzed by high performance liquid chromatography from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L)	OCRESOL 4,6-DINITRO WAT,FLT GF 0.7U REC (UG/L)	ACIFL-UORFEN WATER, FLTRD, GF 0.7U REC (UG/L)	1-NAPH THOL, WATER, FLTRD, GF 0.7U REC (UG/L)	AMIBEN, WATER, FLTRD, GF 0.7U REC (UG/L)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L)	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L)
14206298	05-27-94	**	**	**	**	**	**	**	**	**	**
	11-23-94	**	**	**	**	**	**	0.42000	**	**	**
14206950	05-24-94	**	**	**	**	**	**	0.27000	**	**	**
	06-16-94	**	**	**	**	**	**	0.05000	**	**	**
	10-27-94	**	**	**	**	**	**	E0.55000	**	**	**
	11-30-94	**	**	**	**	**	**	0.19000	**	**	**
14207500	05-25-94	**	**	**	**	**	**	0.05000	**	**	**
	10-28-94	**	**	**	**	**	**	E0.31000	**	**	**
452823122240900	05-24-94	**	**	**	**	**	**	E0.33000	**	**	**
	10-27-94	0.23000	**	**	**	**	**	**	**	**	**
	10-28-94	**	**	**	**	**	**	**	**	**	**
	11-01-94	**	**	**	**	**	**	**	**	**	**
	11-03-94	**	**	**	**	**	**	0.08000	**	**	**
	11-23-94	**	**	**	**	**	**	0.07000	**	**	**
453043122402200	06-17-94	**	**	**	**	**	**	**	**	**	**
14211720	06-14-94	**	**	**	**	**	**	**	**	**	**
	10-25-94	**	**	**	**	**	**	E0.21000	**	**	**
	10-29-94	**	**	**	**	**	**	**	**	**	**
	11-03-94	**	**	**	**	**	**	0.24000	**	**	**
453154122394200	05-31-94	**	**	**	**	**	**	E1.7000	**	**	**
	11-08-94	**	**	**	**	**	**	**	**	**	**
	11-08-94	**	**	**	**	**	**	**	**	**	**
	11-30-94	**	**	**	**	**	**	**	**	**	**
	11-30-94	**	**	**	**	**	**	0.10000	**	**	**
	12-02-94	**	**	**	**	**	**	**	**	**	**
14211805	05-23-94	**	**	**	**	**	**	**	**	**	**

Table 38. Concentrations of pesticides in filtered water analyzed by high performance liquid chromatography from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

STATION NUMBER	DATE	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L)	ESFEN-VAL-ERATE, WAT,FLT GF 0.7U REC (UG/L)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L)	TRI-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L)	BRO-MACIL, WATER, DISS, REC (UG/L)	BDMC, SURROG, WATER, UNFLTRD REC PERCENT
14206298	05-27-94	**	**	**	**	**	**	**	**	106.00
	11-23-94	**	**	**	**	**	**	0.05000	**	69.000
14206950	05-24-94	**	**	**	**	**	**	**	**	21.000
	06-16-94	**	**	**	**	**	**	**	**	--
	10-27-94	**	**	**	**	**	**	0.11000	**	83.000
	11-30-94	**	**	**	**	**	**	**	**	70.000
14207500	05-25-94	**	**	**	**	**	**	**	**	26.000
	10-28-94	**	**	**	**	**	**	**	**	94.000
452823122240900	05-24-94	**	**	**	**	**	**	**	**	30.000
	10-27-94	**	**	**	**	**	**	**	**	70.000
	10-28-94	**	**	**	**	**	**	**	**	118.00
	11-01-94	**	**	**	**	**	**	0.46000	**	72.000
	11-03-94	**	**	**	**	**	**	**	**	104.00
	11-23-94	**	**	**	**	**	**	**	**	67.000
453043122402200	06-17-94	**	**	**	**	**	**	**	**	--
14211720	06-14-94	**	**	**	**	**	**	**	**	93.000
	10-25-94	**	**	**	**	**	**	**	**	136.00
	10-29-94	**	**	**	**	**	**	**	**	98.000
	11-03-94	**	**	**	**	**	**	**	**	58.000
453154122394200	05-31-94	**	**	**	**	**	**	**	**	--
	11-08-94	**	**	**	**	**	**	**	**	62.000
	11-08-94	**	**	**	**	**	**	**	**	119.00
	11-30-94	**	**	**	**	**	**	**	**	156.00
	11-30-94	**	**	**	**	**	**	**	**	56.000
	12-02-94	**	**	**	**	**	**	**	**	55.000
14211805	05-23-94	**	**	**	**	**	**	**	**	56.000

Table 39. Concentrations of triazine herbicides in filtered water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

[USGS laboratory schedule 8015; <, less than; ug/L, micrograms per liter]

Station Name	Station number	Date	Time	Alachlor (ug/L)	Ametryn (ug/L)	Atrazine (ug/L)	Bromacil (ug/L)	Butachlor (ug/L)
Coast Fork Willamette R nr London, OR	433548123040600	940520	1050	<0.009	<0.008	<0.011	<0.025	<0.010
Coast Fork Willamette R nr Eugene, OR	440045122585600	940519	1030	<0.009	<0.008	0.005	<0.025	<0.010
Urban outfall, Eugene, OR	440402123063900	940613	1220	<0.009	<0.008	0.009	<0.025	<0.010
Mack Cr nr Blue River, OR	441310122095801	940527	1040	<0.009	<0.008	<0.011	<0.025	<0.010
McKenzie R nr Eugene, OR	440707123041300	940519	1500	<0.009	<0.008	0.002	<0.025	<0.010
Long Tom R nr Monroe, OR	442223123153703	941101	1730	<0.009	<0.008	0.012	0.076	<0.010
Muddy Cr nr Peoria, OR	443138123120901	941102	1020	0.001	<0.008	0.260	<0.025	<0.010
		941106	1210	<0.009	<0.008	0.558	<0.025	<0.010
		941109	1430	<0.009	<0.008	0.209	<0.025	<0.010
Rock Cr nr Philomath, OR	443045123273000	940518	1830	<0.009	<0.008	<0.011	<0.025	<0.010
Mary's R at Corvallis, OR	443321123155201	940518	1400	<0.009	<0.008	0.024	<0.025	<0.010
Calapooia R at Albany, OR	14173500	941101	1240	<0.009	0.003	0.292	<0.025	<0.010
Luckiamute R nr Buena Vista, OR	444349123094000	940516	1730	<0.009	<0.008	0.031	<0.025	<0.010
Thomas Cr nr Jefferson, OR	444123122562200	940516	1910	<0.009	<0.008	0.012	0.008	<0.010
Santiam R at Jefferson, OR	14189000	940517	1630	<0.009	<0.008	0.004	<0.025	<0.010
Rickreall Cr nr Salem, OR	445547123065400	940526	1550	<0.009	<0.008	0.026	<0.025	<0.010
Pringle Cr at Salem, OR	14190970	941123	1210	<0.009	<0.008	0.025	0.038	<0.010
		941130	1540	<0.009	<0.008	0.053	0.042	<0.010
		941130	1720	<0.009	<0.008	0.066	0.049	<0.010
Mill Cr nr Turner, OR	445037122573800	940614	1150	<0.009	0.007	0.014	<0.025	<0.010
		941031	1410	0.003	<0.008	0.657	<0.025	<0.010
		941104	1130	0.003	<0.008	0.215	<0.025	<0.010
		941104	1430	0.002	<0.008	0.239	<0.025	<0.010
South Yamhill R at McMinneville, OR	14194150	940517	1730	<0.009	<0.008	0.015	<0.025	<0.010
		941102	1210	<0.009	<0.008	0.028	<0.025	<0.010
North Yamhill R nr McMinneville, OR	451355123093600	940517	1230	<0.009	<0.008	0.006	<0.025	<0.010
Willamette R nr Newberg, OR	451602122564400	940531	1410	<0.009	<0.008	0.011	<0.025	<0.010
Champoeg Cr nr Butteville, OR	451502122524700	940526	1040	<0.009	0.002	0.076	<0.025	<0.010
		941031	1310	<0.009	<0.008	0.060	0.022	<0.010
Zollner Cr nr Mt. Angel, OR	14201300	941028	1330	<0.009	<0.008	0.566	<0.025	<0.010
Pudding R at Aurora, OR	14202000	941028	1720	<0.009	<0.008	0.124	<0.025	<0.010
		941029	1240	<0.009	<0.008	0.041	0.010	<0.010
		941109	1300	<0.009	<0.008	0.077	<0.025	<0.010
Molalla R nr Canby, OR	451603122423301	940525	1030	<0.009	<0.008	0.002	<0.025	<0.010
Dairy Cr nr Hillsboro, OR	14206200	940527	1650	<0.009	0.001	0.058	<0.025	<0.010
		941201	1150	0.001	<0.008	0.454	0.063	<0.010
Bronson Cr nr Aloha, OR	14206298	940527	1110	<0.009	<0.008	0.033	<0.025	<0.010
		941123	1040	<0.009	<0.008	0.011	<0.025	<0.010
Fanno Cr at Durham, OR	14206950	941027	1630	<0.009	0.002	0.006	0.012	<0.010

Table 39. Concentrations of triazine herbicides in filtered water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

Station number	Date	Butylate (ug/L)	Carboxin (ug/L)	Cyanazine (ug/L)	Cycloate (Estimated) (ug/L)	Desethyl-atrazine (Estimated) (ug/L)	Desisoproyl-atrazine (Estimated) (ug/L)	Diphenamid (ug/L)
433548123040600	940520	<0.006	<0.008	<0.008	0.003	<0.013	<0.005	<0.010
440045122585600	940519	<0.006	<0.008	<0.008	0.002	<0.013	<0.005	<0.010
440402123063900	940613	<0.006	<0.008	<0.008	<0.013	0.003	0.011	<0.010
441310122095801	940527	<0.006	<0.008	<0.008	0.002	<0.013	<0.005	<0.010
440707123041300	940519	<0.006	<0.008	<0.008	0.003	<0.013	<0.005	<0.010
442223123153703	941101	0.001	<0.008	<0.008	0.001	0.002	0.004	<0.010
443138123120901	941102	<0.006	<0.008	<0.008	<0.013	0.006	0.008	<0.010
	941106	<0.006	<0.008	<0.008	<0.013	0.009	0.009	<0.010
	941109	<0.006	<0.008	<0.008	<0.013	0.010	0.006	<0.010
443045123273000	940518	<0.006	<0.008	<0.008	0.002	<0.013	<0.005	<0.010
443321123155201	940518	<0.006	<0.008	<0.008	<0.013	0.005	<0.005	<0.010
14173500	941101	<0.006	<0.008	<0.008	<0.013	0.006	0.004	<0.010
444349123094000	940516	<0.006	<0.008	<0.008	0.003	<0.013	<0.005	<0.010
444123122562200	940516	<0.006	<0.008	<0.008	0.002	<0.013	<0.005	<0.010
14189000	940517	<0.006	<0.008	<0.008	0.002	<0.013	<0.005	<0.010
445547123065400	940526	<0.006	<0.008	<0.008	0.004	0.005	<0.005	<0.010
14190970	941123	<0.006	<0.008	<0.008	<0.013	0.003	0.013	<0.010
	941130	<0.006	<0.008	<0.008	<0.013	0.003	<0.005	<0.010
	941130	<0.006	<0.008	<0.008	<0.013	0.003	<0.005	<0.010
445037122573800	940614	<0.006	<0.008	<0.008	0.002	0.004	<0.005	<0.010
	941031	<0.006	<0.008	<0.008	0.002	0.032	<0.005	<0.010
	941104	<0.006	<0.008	<0.008	<0.013	0.012	0.003	<0.010
	941104	<0.006	<0.008	0.001	<0.013	0.009	0.002	<0.010
14194150	940517	<0.006	<0.008	<0.008	0.002	<0.013	<0.005	<0.010
	941102	<0.006	<0.008	<0.008	<0.013	0.002	0.002	<0.010
451355123093600	940517	<0.006	<0.008	<0.008	0.002	<0.013	<0.005	<0.010
451602122564400	940531	<0.006	<0.008	<0.008	<0.013	<0.013	<0.005	<0.010
451502122524700	940526	<0.006	<0.008	<0.008	0.002	0.011	<0.005	<0.010
	941031	0.002	<0.008	<0.008	0.002	0.003	0.012	0.001
14201300	941028	<0.006	<0.008	<0.008	0.020	0.022	0.007	0.002
14202000	941028	<0.006	<0.008	<0.008	0.010	0.003	0.003	0.001
	941029	<0.006	<0.008	<0.008	0.002	0.002	0.002	<0.010
	941109	<0.006	<0.008	<0.008	0.001	0.006	0.002	<0.010
451603122423301	940525	<0.006	<0.008	<0.008	0.014	<0.013	<0.005	<0.010
14206200	940527	<0.006	<0.008	<0.008	0.004	0.003	0.002	0.006
	941201	<0.006	<0.008	<0.008	<0.013	0.018	0.004	0.001
14206298	940527	<0.006	<0.008	<0.008	0.005	0.003	<0.005	<0.010
	941123	<0.006	<0.008	<0.008	<0.013	0.002	0.007	<0.010
14206950	941027	<0.006	<0.008	<0.008	<0.013	<0.013	<0.005	<0.010

Table 39. Concentrations of triazine herbicides in filtered water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

Station number	Date	Hexazinone (ug/L)	Metolachlor (ug/L)	Metribuzin (ug/L)	Prometon (ug/L)	Prometryn (ug/L)	Propachlor (ug/L)
433548123040600	940520	<0.016	<0.013	<0.006	<0.009	<0.009	<0.010
440045122585600	940519	<0.016	<0.013	<0.006	<0.009	<0.009	<0.010
440402123063900	940613	<0.016	0.004	0.050	0.008	0.002	<0.010
441310122095801	940527	<0.016	<0.013	<0.006	0.001	<0.009	<0.010
440707123041300	940519	<0.016	<0.013	<0.006	<0.009	<0.009	<0.010
442223123153703	941101	0.001	0.008	0.002	0.003	<0.009	<0.010
443138123120901	941102	0.001	0.178	0.003	<0.009	<0.009	<0.010
	941106	0.008	0.439	0.081	<0.009	<0.009	<0.010
	941109	0.002	0.147	0.028	0.001	<0.009	<0.010
443045123273000	940518	<0.016	<0.013	<0.006	<0.009	<0.009	<0.010
443321123155201	940518	<0.016	<0.013	<0.006	<0.009	<0.009	<0.010
14173500	941101	0.001	0.507	0.029	0.002	<0.009	0.001
444349123094000	940516	0.002	0.002	<0.006	<0.009	<0.009	<0.010
444123122562200	940516	0.003	0.001	<0.006	<0.009	<0.009	<0.010
14189000	940517	<0.016	0.002	<0.006	<0.009	<0.009	<0.010
445547123065400	940526	0.002	0.010	<0.006	0.006	<0.009	<0.010
14190970	941123	<0.016	0.005	0.007	0.005	<0.009	<0.010
	941130	<0.016	0.005	0.025	0.016	<0.009	<0.010
	941130	<0.016	0.005	0.025	0.016	<0.009	<0.010
445037122573800	940614	<0.016	0.046	<0.006	0.001	<0.009	<0.010
	941031	0.003	0.131	0.009	0.006	<0.009	<0.010
	941104	0.005	0.132	0.024	0.002	<0.009	<0.010
	941104	0.005	0.130	0.017	0.003	<0.009	<0.010
14194150	940517	<0.016	0.071	<0.006	<0.009	<0.009	<0.010
	941102	0.001	0.014	0.001	<0.009	<0.009	<0.010
451355123093600	940517	<0.016	<0.013	<0.006	<0.009	<0.009	<0.010
451602122564400	940531	<0.016	0.006	<0.006	<0.009	<0.009	<0.010
451502122524700	940526	0.007	0.136	<0.006	<0.009	<0.009	<0.010
	941031	0.001	0.842	0.006	<0.009	<0.009	<0.010
14201300	941028	0.005	0.122	0.004	<0.009	<0.009	<0.010
14202000	941028	0.004	0.086	0.002	<0.009	<0.009	<0.010
	941029	0.003	0.035	0.001	<0.009	<0.009	0.003
	941109	0.012	0.043	0.007	<0.009	<0.009	<0.010
451603122423301	940525	<0.016	<0.013	<0.006	<0.009	<0.009	<0.010
14206200	940527	0.004	0.008	<0.006	0.003	<0.009	<0.010
	941201	0.040	0.019	0.012	0.003	<0.009	<0.010
14206298	940527	0.003	<0.013	<0.006	0.010	<0.009	<0.010
	941123	<0.016	0.002	0.004	0.007	<0.009	<0.010
14206950	941027	<0.016	0.007	0.011	0.026	<0.009	0.001

Table 39. Concentrations of triazine herbicides in filtered water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

Station number	Date	Propazine (ug/L)	Simazine (ug/L)	Simetryn (ug/L)	Terbacil (ug/L)	Trifluralin (ug/L)	Vernolate (ug/L)	Terbuthyl-azine (surrogate) (percent)
433548123040600	940520	<0.008	<0.014	<0.006	<0.011	<0.003	<0.011	103.36
440045122585600	940519	<0.008	<0.014	<0.006	<0.011	<0.003	<0.011	93.07
440402123063900	940613	<0.008	0.013	<0.006	<0.011	<0.003	<0.011	56.05
441310122095801	940527	<0.008	<0.014	<0.006	<0.011	<0.003	<0.011	104.29
440707123041300	940519	<0.008	<0.014	<0.006	<0.011	<0.003	<0.011	89.30
442223123153703	941101	<0.008	0.032	<0.006	0.081	0.002	0.002	50.71
443138123120901	941102	0.003	0.222	0.001	0.026	<0.003	<0.011	57.94
	941106	0.006	0.177	0.001	0.061	<0.003	<0.011	87.32
	941109	0.004	0.054	<0.006	0.069	<0.003	<0.011	57.66
443045123273000	940518	<0.008	<0.014	<0.006	<0.011	<0.003	<0.011	91.36
443321123155201	940518	<0.008	0.004	<0.006	<0.011	<0.003	<0.011	105.86
14173500	941101	0.004	0.064	<0.006	0.004	<0.003	<0.011	63.41
444349123094000	940516	<0.008	0.001	<0.006	0.009	<0.003	<0.011	98.78
444123122562200	940516	<0.008	0.001	<0.006	<0.011	<0.003	<0.011	91.98
14189000	940517	<0.008	<0.014	<0.006	<0.011	<0.003	<0.011	91.34
445547123065400	940526	<0.008	0.038	<0.006	<0.011	<0.003	<0.011	90.57
14190970	941123	<0.008	0.033	0.001	<0.011	0.002	<0.011	74.10
	941130	<0.008	0.074	<0.006	<0.011	0.002	<0.011	98.11
	941130	<0.008	0.076	<0.006	<0.011	0.001	<0.011	97.29
445037122573800	940614	<0.008	0.025	<0.006	0.058	<0.003	<0.011	71.13
	941031	0.009	0.050	0.001	0.812	0.001	<0.011	73..77
	941104	0.004	0.070	<0.006	0.344	<0.003	<0.011	58.45
	941104	0.003	0.089	<0.006	0.342	<0.003	<0.011	53.25
14194150	940517	<0.008	0.009	<0.006	<0.011	<0.003	<0.011	76.81
	941102	<0.008	0.010	<0.006	<0.011	<0.003	<0.011	70.29
451355123093600	940517	<0.008	0.001	<0.006	0.007	<0.003	<0.011	76.61
451602122564400	940531	<0.008	<0.014	<0.006	<0.011	<0.003	<0.011	115.70
451502122524700	940526	<0.008	0.081	<0.006	<0.011	<0.003	<0.011	94.17
	941031	<0.008	0.393	0.001	0.008	<0.003	<0.011	62.12
14201300	941028	0.008	0.242	<0.006	0.018	0.004	0.002	59.91
14202000	941028	0.001	0.102	0.001	0.006	<0.003	<0.011	67.65
	941029	<0.008	0.056	<0.006	0.006	<0.003	<0.011	58.98
	941109	0.001	0.034	<0.006	0.005	<0.003	<0.011	68.46
451603122423301	940525	<0.008	0.001	<0.006	<0.011	<0.003	<0.011	91.42
14206200	940527	<0.008	0.022	<0.006	0.004	<0.003	<0.011	129.01
	941201	0.005	0.072	<0.006	0.014	<0.003	<0.011	84.69
14206298	940527	<0.008	0.035	0.004	<0.011	<0.003	<0.011	127.04
	941123	<0.008	0.246	<0.006	<0.011	<0.003	<0.011	77.36
14206950	941027	<0.008	0.048	<0.006	<0.011	<0.003	<0.011	53.52

Table 39. Concentrations of triazine herbicides in filtered water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

Station Name	Station number	Date	Time	Alachlor (ug/L)	Ametryn (ug/L)	Atrazine (ug/L)	Bromacil (ug/L)	Butachlor (ug/L)
Tualatin R at West Linn, OR	14207500	940525	1550	<0.009	<0.008	0.022	<0.025	<0.010
		941028	1620	<0.009	<0.008	0.006	<0.025	<0.010
Johnson Cr nr Gresham, OR	452823122240900	940524	1450	<0.009	<0.008	0.020	<0.025	<0.010
		941027	1650	<0.009	<0.008	0.059	<0.025	<0.010
		941028	1145	<0.009	<0.008	0.030	<0.025	<0.010
		941101	1110	<0.009	<0.008	0.019	<0.025	<0.010
		941103	1340	<0.009	<0.008	0.016	<0.025	<0.010
		941123	1420	<0.009	<0.008	0.022	<0.025	<0.010
Urban outfall, Portland, OR	453043122402200	940617	2150	<0.009	<0.008	0.010	<0.025	<0.010
Willamette R at Portland, OR	14211720	941029	1240	<0.009	<0.008	0.012	0.011	<0.010
		941103	0956	<0.009	<0.008	0.051	<0.025	<0.010
Interstate 84 Transportation Corridor at Portland, OR	453154122394200	940531	1810	<0.009	<0.008	0.012	<0.025	<0.010
		941108	1810	<0.009	<0.008	0.013	<0.025	<0.010
		941108	2000	<0.009	<0.008	0.011	<0.025	<0.010
		941130	0850	<0.009	<0.008	<0.011	<0.025	<0.010
		941130	1030	<0.009	<0.008	<0.011	<0.025	<0.010
		941202	1030	<0.009	<0.008	0.007	<0.025	<0.010
Willamette R ab St. John's Bridge, Portland, OR	14211805	940523	1000	<0.009	<0.008	0.009	0.003	<0.010

Table 39. Concentrations of triazine herbicides in filtered water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

Station number	Date	Butylate (ug/L)	Carboxin (ug/L)	Cyanazine (ug/L)	Cycloate (Estimated) (ug/L)	Desethyl-atrazine (Estimated) (ug/L)	Desisoproyl-atrazine (Estimated) (ug/L)	Diphenamid (ug/L)
14207500	940525	<0.006	<0.008	<0.008	0.003	0.002	<0.005	<0.010
	941028	<0.006	<0.008	<0.008	<0.013	0.001	<0.005	0.001
452823122240900	940524	<0.006	<0.008	<0.008	<0.013	0.005	<0.005	<0.010
	941027	<0.006	<0.008	<0.008	<0.013	0.003	0.002	0.003
	941028	<0.006	<0.008	<0.008	<0.013	0.004	0.002	0.002
	941101	<0.006	<0.008	<0.008	<0.013	0.002	<0.005	0.001
	941103	<0.006	<0.008	<0.008	<0.013	0.003	0.002	0.001
	941123	<0.006	<0.008	<0.008	<0.013	0.005	<0.005	0.001
453043122402200	940617	<0.006	<0.008	<0.008	<0.013	<0.013	<0.005	<0.010
14211720	941029	<0.006	<0.008	<0.008	0.001	0.001	0.002	<0.010
	941103	<0.006	<0.008	<0.008	<0.013	0.001	<0.005	<0.010
453154122394200	940531	<0.006	<0.008	<0.008	<0.013	<0.013	<0.005	<0.010
	941108	<0.006	<0.008	<0.008	<0.013	<0.013	<0.005	<0.010
	941108	<0.006	<0.008	<0.008	<0.013	<0.013	<0.005	<0.010
	941130	<0.006	<0.008	<0.008	<0.013	<0.013	<0.005	<0.010
	941130	<0.006	<0.008	<0.008	<0.013	<0.013	<0.005	<0.010
	941202	<0.006	<0.008	<0.008	0.002	0.018	0.023	<0.010
14211805	940523	<0.006	<0.008	<0.008	0.003	<0.013	<0.005	<0.010

Table 39. Concentrations of triazine herbicides in filtered water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

Station number	Date	Hexazinone (ug/L)	Metolachlor (ug/L)	Metribuzin (ug/L)	Prometon (ug/L)	Prometryn (ug/L)	Propachlor (ug/L)
14207500	940525	<0.016	0.046	<0.006	<0.009	<0.009	<0.010
	941028	<0.016	0.010	<0.006	0.009	<0.009	<0.010
452823122240900	940524	0.005	0.021	<0.006	0.004	<0.009	<0.010
	941027	0.002	0.110	0.002	0.004	<0.009	<0.010
	941028	0.003	0.079	0.001	0.004	<0.009	<0.010
	941101	0.006	0.067	<0.006	0.003	<0.009	<0.010
	941103	0.009	0.050	0.001	0.002	<0.009	<0.010
	941123	0.007	0.034	0.001	0.003	<0.009	<0.010
453043122402200	940617	<0.016	0.017	0.147	<0.009	<0.009	<0.010
14211720	941029	0.002	0.020	<0.006	0.001	<0.009	<0.010
	941103	0.002	0.036	0.002	0.001	<0.009	<0.010
453154122394200	940531	<0.016	0.005	0.158	<0.009	<0.009	<0.010
	941108	<0.016	0.032	0.090	<0.009	<0.009	<0.010
	941108	<0.016	0.052	0.103	<0.009	<0.009	<0.010
	941130	<0.016	0.040	0.135	<0.009	<0.009	<0.010
	941130	<0.016	0.007	0.113	<0.009	<0.009	<0.010
	941202	<0.016	0.002	0.028	0.005	<0.009	<0.010
14211805	940523	0.001	0.002	<0.006	<0.009	<0.009	<0.010

Table 39. Concentrations of triazine herbicides in filtered water from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

Station number	Date	Propazine (ug/L)	Simazine (ug/L)	Simetryn (ug/L)	Terbacil (ug/L)	Trifluralin (ug/L)	Vernolate (ug/L)	Terbuthyl-azine (surrogate) (percent)
14207500	940525	<0.008	0.001	<0.006	0.297	<0.003	<0.011	87
	941028	<0.008	0.025	<0.006	<0.011	0.001	<0.011	55
452823122240900	940524	<0.008	0.065	<0.006	<0.011	0.004	<0.011	52
	941027	0.001	0.037	<0.006	0.006	0.002	<0.011	56
	941028	<0.008	0.022	<0.006	0.007	0.002	<0.011	59
	941101	<0.008	0.019	<0.006	0.005	0.001	<0.011	53
	941103	<0.008	0.011	<0.006	0.005	0.001	<0.011	67
	941123	<0.008	0.007	<0.006	<0.011	0.003	<0.011	83
453043122402200	940617	<0.008	0.067	<0.006	<0.011	<0.003	<0.011	59
14211720	941029	<0.008	0.018	<0.006	0.010	<0.003	<0.011	62
	941103	<0.008	0.017	<0.006	0.014	<0.003	<0.011	52
453154122394200	940531	<0.008	0.014	<0.006	0.013	<0.003	<0.011	39
	941108	<0.008	0.008	<0.006	0.042	<0.003	<0.011	56
	941108	<0.008	0.007	<0.006	0.036	0.001	<0.011	78
	941130	<0.008	<0.014	<0.006	<0.011	<0.003	<0.011	92
	941130	<0.008	<0.014	<0.006	<0.011	0.001	<0.011	82
	941202	<0.008	0.032	0.001	<0.011	<0.003	<0.011	100
14211805	940523	<0.008	0.007	<0.006	0.020	<0.003	<0.011	77

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QUALITY-ASSURANCE DATA

Table 40. Concentrations of trace elements in splits of whole water samples from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

[Concentrations in micrograms per liter]

Sample type	Split		
Station	453154122394200		
Date	94-11-08		
Analyte	Sample 1	Sample 2	Relative percent difference
Arsenic	1.0	1.0	0.0
Cadmium	2.0	2.0	0.0
Chromium	8.6	8.9	3.4
Copper	19.0	19.0	0.0
Lead	39.0	37.0	5.3
Nickel	8.0	8.0	0.0
Zinc	210.0	210.0	0.0

Table 41. Concentrations of trace elements in splits of filtered water samples from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

[<, less than; --, not calculated; concentrations in micrograms per liter]

Sample type	Split		
Station	453154122394200		
Date	94-11-08		
Analyte	Sample 1	Sample 2	Relative percent difference
Arsenic	2.0	1.0	66.7
Aluminum	203.0	180.0	12.0
Antimony	2.0	2.0	0.0
Barium	52.0	52.0	0.0
Beryllium	< 1.0	< 1.0	--
Cadmium	< 1.0	< 1.0	--
Chromium	2.0	2.0	0.0
Cobalt	< 1.0	< 1.0	--
Copper	9.0	7.0	25.0
Lead	3.0	2.0	40.0
Manganese	28.0	27.0	3.6
Molybdenum	2.0	2.0	0.0
Nickel	4.0	3.0	28.6
Selenium	< 1.0	< 1.0	--
Silver	< 1.0	< 1.0	--
Uranium	< 1.0	< 1.0	--
Zinc	54.0	55.0	1.8

Table 42. Concentrations of organochlorine compounds in splits and field matrix spikes of whole water samples from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

[USGS laboratory schedule 1398; < = less than; --, not calculated; concentrations in milligrams per liter; NS, analyte not in spike solution; computed concentration, ((spike volume * spike concentration)/sample volume) + native water concentration; measured concentration, value from laboratory analysis; percent recovery, (measured concentration/computed concentration) * 100]

Sample type	Split 1		Split 2		Split 3		Field matrix spike 1			Field matrix spike 2			Field matrix spike 3		
Station	443138123120901		445547123065400		445037122573800		443138123120901			443138123120901			451502122524701		
Date	94-11-06		94-05-26		94-10-31		94-11-06			94-11-06			94-05-26		
Analyte	Sample 1	Sample 2	Sample 1	Sample 2	Sample 1	Sample 2	Measured concentration	Computed concentration	Percent recovery	Measured concentration	Computed concentration	Percent recovery	Measured concentration	Computed concentration	Percent recovery
Perthane	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	NS	--	<0.100	NS	--	<0.100	NS	--
Chlordane	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	NS	--	<0.100	NS	--	<0.100	NS	--
Toxaphene	<1.000	<1.000	<1.000	<1.000	<1.000	<1.000	<1.000	NS	--	<1.000	NS	--	<1.000	NS	--
PCB	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	NS	--	<0.100	NS	--	<0.100	NS	--
PCN	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	NS	--	<0.100	NS	--	<0.100	NS	--
Methoxychlor	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	NS	--	<0.010	NS	--	<0.010	NS	--
Mirex	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	NS	--	<0.010	NS	--	<0.010	NS	--
Endosulfan I	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.500	1.162	43.0	0.500	1.180	42.4	<0.001	NS	--
Aldrin	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.300	0.581	51.7	0.300	0.590	50.9	<0.001	NS	--
DDD	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	1.400	3.486	40.2	1.400	3.540	39.5	<0.001	NS	--
DDE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.500	1.162	43.0	0.500	1.180	42.4	0.070	0.112	62.6
DDT	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	1.000	3.486	28.7	1.000	3.540	28.2	<0.001	NS	--
Dieldrin	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.400	1.162	34.4	0.400	1.180	33.9	0.072	0.113	63.8
Endrin	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.700	1.162	60.2	0.700	1.180	59.3	<0.001	NS	--
Heptachlor	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.300	0.581	51.7	0.300	0.590	50.9	<0.001	NS	--
Heptachlor epoxide	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.300	0.581	51.7	0.300	0.590	50.9	<0.001	NS	--
Lindane	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.300	0.581	51.7	0.400	0.590	67.8	0.100	0.144	69.5

Table 43. Concentrations of pesticides analyzed by gas chromatography/mass spectroscopy in splits and field matrix spikes of filtered water samples from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

[USGS laboratory schedule 2010; <, less than method detection limit; E, estimate; --, not calculated; concentrations in micrograms per liter; Breakthrough, concentration passing through first solid-phase extraction cartridge into second cartridge; computed concentration, ((spike volume * spike concentration)/sample volume) + native water concentration; measured concentration, value from laboratory analysis; percent recovery, (measured concentration/computed concentration) * 100]

Sample type	Split 1			Split 2			Field matrix spike 1				Field matrix spike 2			Field matrix spike 3		
Station	445547123065400			452823122240900			14190970				443138123120901			451502122524701		
Date	94-05-26			94-11-01			94-11-23				94-11-06			94-05-26		
Analyte	Sample 1	Sample 2	Relative percent difference	Sample 1	Sample 2	Relative percent difference	Measured concen-tration	Computed concen-tration	Percent recovery	Break through	Measured concen-tration	Computed concen-tration	Percent recovery	Measured concen-tration	Computed concen-tration	Percent recovery
Alachlor	<0.009	<0.009	--	<0.009	<0.009	--	0.140	0.110	127.3	0.009	0.120	0.111	108.1	0.110	0.111	99.1
Atrazine	0.046	0.047	2.2	0.047	0.047	0.0	0.160	0.152	105.3	<0.017	1.000	0.922	108.5	0.240	0.252	95.2
Azinphos methyl	<0.038	<0.038	--	<0.038	<0.038	--	E0.120	0.110	109.1	<0.038	E0.130	0.102	127.4	0.250	0.102	245.0
Benflural	<0.013	<0.013	--	<0.013	<0.013	--	0.093	0.110	84.5	<0.013	0.089	0.102	87.2	0.096	0.102	94.1
Butylate	<0.008	<0.008	--	<0.008	<0.008	--	0.120	0.110	109.1	<0.008	0.100	0.102	98.0	0.100	0.102	98.0
Carbaryl	0.005	0.007	33.3	<0.046	<0.046	--	E0.120	0.110	109.1	<0.046	E0.120	0.102	117.6	0.160	0.102	156.8
Carbofuran	<0.013	<0.013	--	<0.013	<0.013	--	E0.130	0.110	118.2	<0.013	E0.110	0.102	107.8	0.130	0.102	127.4
Chlorpyrifos	<0.005	<0.005	--	<0.005	<0.005	--	0.130	0.110	118.2	<0.005	0.120	0.102	117.6	0.110	0.102	107.8
Cyanazine	<0.013	<0.013	--	<0.013	<0.013	--	0.130	0.110	118.2	<0.013	0.100	0.102	98.0	0.099	0.102	97.0
DCPA	<0.004	<0.004	--	<0.004	<0.004	--	0.130	0.110	118.2	<0.004	0.120	0.102	117.6	0.120	0.103	116.5
DDE p, p'	<0.010	<0.010	--	E0.003	E0.002	40.0	0.066	0.110	60.0	E0.007	0.073	0.102	71.5	0.072	0.102	70.6
Desethyl atrazine	<0.007	<0.007	--	E0.005	E0.010	66.7	E0.053	0.121	43.8	E0.037	E0.048	0.117	41.0	0.045	0.124	36.3
Diazinon	0.005	0.006	18.2	E0.008	E0.007	13.3	0.100	0.110	90.9	<0.008	0.083	0.102	81.3	0.090	0.102	88.2
Dieldrin	<0.008	<0.008	--	0.016	0.015	6.5	0.120	0.110	109.1	<0.008	0.097	0.102	95.1	0.093	0.102	91.1
Diethylaniline	<0.006	<0.006	--	<0.006	<0.006	--	0.095	0.110	86.4	<0.006	0.076	0.102	74.5	0.090	0.102	88.2
Dimethoate	<0.024	<0.024	--	--	--	--	--	--	--	--	--	--	--	0.013	0.102	12.7
Disulfoton	<0.008	<0.008	--	<0.060	<0.060	--	0.190	0.110	172.7	<0.060	0.099	0.102	97.0	0.230	0.102	225.4
EPTC	<0.005	<0.005	--	<0.005	<0.005	--	0.110	0.112	98.2	<0.005	0.094	0.102	92.1	0.120	0.102	117.6
Ethalfluralin	<0.013	<0.013	--	<0.013	<0.013	--	0.130	0.110	118.2	<0.013	0.110	0.102	107.8	0.120	0.102	117.6
Ethoprop	<0.012	<0.012	--	<0.012	<0.012	--	0.140	0.110	127.3	<0.012	0.120	0.102	117.6	0.110	0.107	102.8
Fonofos	<0.008	<0.008	--	<0.008	<0.008	--	0.120	0.110	109.1	<0.008	0.100	0.102	98.0	0.100	0.102	98.0
HCH Alpha	<0.007	<0.007	--	0.007	0.007	0.0	0.130	0.117	111.1	0.007	0.120	0.109	110.1	0.100	0.109	91.7
Lindane	<0.011	<0.011	--	E0.005	<0.011	--	0.130	0.110	118.2	<0.011	0.120	0.102	117.6	0.140	0.140	100.0
Linuron	<0.039	<0.039	--	<0.039	<0.039	--	0.057	0.110	51.8	<0.039	0.063	0.102	61.7	0.091	0.102	89.2
Malathion	<0.010	<0.010	--	<0.010	<0.010	--	0.150	0.110	136.4	<0.014	0.140	0.102	137.2	0.140	0.102	137.2
Methyl parathion	<0.035	<0.035	--	<0.035	<0.035	--	0.130	0.110	118.2	<0.035	0.140	0.102	137.2	0.140	0.102	137.2
Metolachlor	0.071	0.073	2.8	0.190	0.190	0.0	0.140	0.121	115.7	<0.009	0.810	0.792	102.3	0.310	0.312	99.3
Metribuzin	<0.012	<0.012	--	<0.012	<0.012	--	0.110	0.110	100.0	0.017	0.200	0.212	94.3	0.120	0.102	117.6
Molinate	<0.007	<0.007	--	<0.007	<0.007	--	0.120	0.110	109.1	<0.007	0.110	0.102	107.8	0.100	0.102	98.0
Napropamide	<0.010	<0.010	--	0.097	0.099	2.0	0.120	0.118	101.7	<0.010	0.100	0.102	98.0	0.110	0.119	92.4
Parathion	<0.022	<0.022	--	<0.022	<0.022	--	0.140	0.110	127.3	<0.022	0.140	0.102	137.2	0.130	0.102	127.4
Pebulate	<0.009	<0.009	--	<0.009	<0.009	--	0.110	0.110	100.0	<0.009	0.096	0.102	94.1	0.096	0.102	94.1
Pendimethalin	<0.018	<0.018	--	<0.018	<0.018	--	0.100	0.110	90.9	<0.018	0.098	0.102	96.0	0.120	0.102	117.6
Permethrin	<0.016	<0.016	--	<0.016	<0.016	--	E0.014	0.110	12.7	<0.016	0.018	0.102	17.6	0.021	0.102	20.6

Table 43. Concentrations of pesticides analyzed by gas chromatography/mass spectroscopy in splits and field matrix spikes of filtered water samples from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

Sample type	Split 1			Split 2			Field matrix spike 1				Field matrix spike 2			Field matrix spike 3		
Station	445547123065400			452823122240900			14190970				443138123120901			451502122524701		
Date	94-05-26			94-11-01			94-11-23				94-11-06			94-05-26		
Analyte	Sample 1	Sample 2	Relative percent difference	Sample 1	Sample 2	Relative percent difference	Measured concen-tration	Computed concen-tration	Percent recovery	Break through	Measured concen-tration	Computed concen-tration	Percent recovery	Measured concen-tration	Computed concen-tration	Percent recovery
Phorate	<0.011	<0.011	--	<0.011	<0.011	--	0.140	0.110	127.3	<0.011	0.068	0.102	66.6	0.089	0.102	87.2
Prometon	<0.008	<0.008	--	0.009	0.010	10.5	0.120	0.122	98.4	<0.008	0.110	0.102	107.8	0.110	0.102	107.8
Pronamide	<0.009	<0.009	--	<0.009	<0.009	--	0.120	0.110	109.1	<0.009	0.120	0.107	112.1	0.140	0.117	119.6
Propachlor	<0.015	<0.015	--	<0.015	<0.015	--	0.130	0.110	118.2	<0.015	0.120	0.102	117.6	0.110	0.102	107.8
Propanil	<0.016	<0.016	--	<0.016	<0.016	--	0.130	0.110	118.2	<0.016	0.120	0.102	117.6	0.120	0.102	117.6
Propargite	<0.006	<0.006	--	<0.006	<0.006	--	0.120	0.110	109.1	<0.006	0.110	0.102	107.8	0.110	0.102	107.8
Simazine	0.005	0.005	0.0	0.078	0.085	8.6	0.170	0.164	103.7	<0.008	0.500	0.482	103.7	0.280	0.332	84.3
Tebuthiuron	<0.015	<0.015	--	<0.015	<0.015	--	0.130	0.142	91.5	<0.015	<0.015	0.102	0.0	0.037	0.102	36.3
Terbacil	0.200	0.210	4.9	E0.010	E0.013	26.1	E0.110	0.110	100.0	E0.019	E0.130	0.163	79.7	0.100	0.102	98.0
Terbufos	<0.012	<0.012	--	<0.012	<0.012	--	0.160	0.110	145.4	<0.012	0.110	0.102	107.8	0.130	0.102	127.4
Thiobencarb	<0.008	<0.008	--	<0.008	<0.008	--	0.130	0.110	118.2	<0.008	0.120	0.102	117.6	0.110	0.102	107.8
Triallate	<0.008	<0.008	--	<0.008	<0.008	--	0.120	0.110	109.1	<0.008	0.100	0.102	98.0	0.098	0.102	96.0
Trifluralin	<0.012	<0.012	--	E0.005	E0.005	0.0	0.098	0.110	89.1	<0.012	0.091	0.102	89.2	0.110	0.102	107.8

Table 44. Concentrations of pesticides analyzed by high performance liquid gas chromatography in splits and field matrix spikes of filtered water samples from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

[NS, analyte not in spike solution; <, less than; E, estimate; --, not calculated; concentrations in micrograms per liter; computed concentration, ((spike volume * spike concentration)/sample volume) + native water concentration; measured concentration, value from laboratory analysis; percent recovery, (measured concentration/computed concentration) * 100; Chlorothalonil, DNOC, Dichlobenil, Esfenvalerate, and 1-Naphthol are selected for removal from schedule 2051 or for qualitative reporting]

Type sample	Split 1		Split 2		Spike 1			Spike 2		
Station	445547123065400		452823122240900		443138123120901			451502122524701		
Date	94-05-26		94-11-01		94-11-06			94-05-26		
Analyte	Sample 1	Sample 2	Sample 1	Sample 2	Measured concentration	Computed concentration	Percent recovery	Measured concentration	Computed concentration	Percent recovery
Dinoseb	<0.050	<0.050	<0.050	<0.050	0.720	1.154	62.4	0.560	1.125	49.8
DNOC	<0.050	<0.050	<0.050	<0.050	0.800	0.868	92.2	0.310	0.847	36.6
Dichlobenil	<0.050	<0.050	<0.050	<0.050	<0.050	NS	--	<0.050	NS	--
2, 4-DB	<0.050	<0.050	<0.050	<0.050	0.580	1.532	37.9	0.390	1.494	26.1
2, 4, 5-T	<0.050	<0.050	<0.050	<0.050	0.520	1.021	50.9	0.650	0.996	65.3
Aldicarb	<0.050	<0.050	<0.050	<0.050	0.110	0.950	11.6	0.140	0.926	15.1
Aldicarb sulfone	<0.050	<0.050	<0.050	<0.050	0.340	1.092	31.1	0.180	1.066	16.9
Bromacil	<0.050	<0.050	<0.050	<0.050	--	1.001	--	0.290	0.976	29.7
Carbaryl	<0.050	<0.050	<0.050	<0.050	0.690	0.990	69.7	0.100	0.966	10.4
Chloramben	<0.050	<0.050	<0.050	<0.050	<0.050	NS	--	<0.050	NS	--
Clopyralid	<0.050	<0.050	<0.050	<0.050	<0.050	NS	--	<0.050	NS	--
Diuron	<0.050	<0.050	<0.050	<0.050	E5.300	6.735	78.7	0.880	1.956	45.0
Fluometuron	<0.050	<0.050	<0.050	<0.050	0.730	1.041	70.1	0.590	1.016	58.1
MCPA	<0.050	<0.050	<0.050	<0.050	0.680	1.123	60.5	0.390	1.096	35.6
Methiocarb	<0.050	<0.050	<0.050	<0.050	0.710	1.021	69.5	0.100	0.996	10.0
1-Naphthol	<0.050	<0.050	<0.050	<0.050	<0.050	1.021	0.0	0.070	0.996	7.0
Oryzalin	<0.050	<0.050	<0.050	<0.050	<0.050	NS	--	<0.050	NS	--
Picloram	<0.050	<0.050	<0.050	<0.050	0.180	1.062	17.0	0.360	1.036	34.8
Silvex	<0.050	<0.050	<0.050	<0.050	0.770	1.052	73.2	0.560	1.026	54.6
Dacthal, mono-acid-	<0.050	<0.050	<0.050	<0.050	--	1.021	--	<0.050	NS	--
Propoxur	<0.050	<0.050	<0.050	<0.050	0.710	1.082	65.6	0.330	1.056	31.3
Dichlorprop	<0.050	<0.050	<0.050	<0.050	0.700	1.082	64.7	0.470	1.056	44.5
Neburon	<0.050	<0.050	<0.050	<0.050	0.440	1.062	41.4	0.530	1.036	51.2
Fenuron	<0.050	<0.050	<0.050	<0.050	E1.500	1.123	133.6	E1.100	1.096	100.4
2, 4-D	<0.050	<0.050	<0.050	<0.050	0.660	0.980	67.3	0.440	0.956	46.0
Acifluorfen	<0.050	<0.050	<0.050	<0.050	<0.050	NS	--	<0.050	NS	--
Aldicarb sulfoxide	<0.050	<0.050	<0.050	<0.050	0.650	1.021	63.6	0.530	0.996	53.2
Bentazon	<0.050	<0.050	<0.050	<0.050	0.610	1.113	54.8	0.430	1.086	39.6
Bromoxynil	<0.050	<0.050	<0.050	<0.050	0.710	1.021	69.5	0.410	0.996	41.2
Carbofuran	<0.050	<0.050	<0.050	<0.050	0.700	1.021	68.5	0.440	0.996	44.2
Chlorothalonil	<0.050	<0.050	<0.050	<0.050	0.220	1.021	21.5	0.080	0.996	8.0
Dicamba	<0.050	<0.050	<0.050	<0.050	0.410	1.062	38.6	0.440	1.036	42.5
Esfenvalerate	<0.050	<0.050	<0.050	<0.050	<0.050	NS	--	<0.050	NS	--
Linuron	<0.050	<0.050	<0.050	<0.050	0.650	0.541	120.1	0.580	0.528	109.9
MCPB	<0.050	<0.050	<0.050	<0.050	<0.050	NS	--	<0.050	NS	--
Methomyl	<0.050	<0.050	<0.050	<0.050	0.670	1.031	65.0	0.510	1.006	50.7
Norflurazon	<0.050	<0.050	<0.050	<0.050	<0.050	NS	--	<0.050	NS	--
Oxamyl	<0.050	<0.050	<0.050	<0.050	E0.540	1.031	52.4	E0.060	0.996	6.0
Propham	<0.050	<0.050	<0.050	<0.050	--	0.449	--	0.540	0.996	54.2
Triclopyr	<0.050	<0.050	0.460	0.380	<0.050	NS	--	<0.050	NS	--
Carbofuran, 3-hydroxy-	<0.050	<0.050	<0.050	<0.050	<0.050	NS	--	<0.050	NS	--
BDMC (surrogate)	40.00	42.00	72.00	66.00	85.00	67.02	126.8	62.00	6.996	886.2

Table 45. Concentrations of pesticides analyzed by high performance liquid gas chromatography in field matrix spikes of filtered water samples from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

[NS, analyte not in spike solution; <, less than; E, estimate; --, not calculated; concentrations in micrograms per liter; computed concentration, ((spike volume * spike concentration)/sample volume) + native water concentration; measured concentration, value from laboratory analysis; percent recovery, (measured concentration/computed concentration) * 100; Breakthrough, concentration passing through solid-Phase extraction cartridge; Chlorothalonil, DNOC, Dichlobenil, Esfenvalerate, and 1-Naphthol are selected for removal from schedule 2051 or for qualitative reporting]

Type sample Station Date	Field matrix spike 3 14190970 94-11-23				Field matrix spike 4 14190970 94-11-23			
Analyte	Measured concen-tration	Computed concen-tration	Percent recovery	Break-through	Measured concen-tration	Computed concen-tration	Percent recovery	Break-through
Dinoseb	0.560	1.162	48.2	<0.050	0.740	1.201	61.6	<0.050
DNOC	0.550	0.874	62.9	<0.050	0.780	0.904	86.3	<0.050
Dichlobenil	<0.050	NS	--	<0.050	<0.050	NS	--	<0.050
2, 4-DB	0.530	1.542	34.4	--	0.770	1.595	48.3	<0.050
2, 4, 5-T	0.990	1.028	96.3	<0.050	0.670	1.063	63.0	<0.050
Aldicarb	--	0.956	--	0.070	0.260	0.989	26.3	<0.050
Aldicarb sulfone	0.410	1.100	37.3	0.470	0.600	1.137	52.8	0.350
Bromacil	0.960	1.007	95.3	0.050	0.880	1.042	84.5	<0.050
Carbaryl	0.560	0.997	56.2	<0.050	0.770	1.031	74.7	<0.050
Chloramben	<0.050	NS	--	<0.050	<0.050	NS	--	<0.050
Clopyralid	<0.050	NS	--	<0.050	<0.050	NS	--	<0.050
Diuron	0.700	1.326	52.8	<0.050	0.590	1.371	43.0	<0.050
Fluometuron	0.750	1.049	71.5	<0.050	0.640	1.084	59.0	<0.050
MCPA	0.550	1.131	48.6	<0.050	0.700	1.169	59.9	<0.050
Methiocarb	0.500	1.028	48.7	<0.050	0.400	1.063	37.6	<0.050
1-Naphthol	<0.050	1.028	0.0	<0.050	<0.050	1.063	0.0	<0.050
Oryzalin	<0.050	NS	--	<0.050	<0.050	NS	--	<0.050
Picloram	0.570	1.069	53.3	0.120	0.050	1.106	4.5	<0.050
Silvex	0.590	1.059	55.7	<0.050	0.740	1.095	67.6	<0.050
Dacthal, mono-acid-	<0.050	NS	--	<0.050	<0.050	NS	--	<0.050
Propoxur	0.740	1.090	67.9	0.070	0.770	1.127	68.3	<0.050
Dichlorprop	0.500	1.090	45.9	<0.050	0.640	1.127	56.8	<0.050
Neburon	0.540	1.069	50.5	<0.050	0.410	1.106	37.1	<0.050
Fenuron	0.930	1.131	82.2	0.050	0.910	1.169	77.8	<0.050
2, 4-D	0.620	0.987	62.8	<0.050	0.810	1.021	79.4	<0.050
Acifluorfen	<0.050	NS	--	<0.050	<0.050	NS	--	<0.050
Aldicarb sulfoxide	0.640	1.028	62.3	0.390	1.200	1.063	112.9	0.070
Bentazon	0.520	1.121	46.4	0.160	0.820	1.159	70.8	<0.050
Bromoxynil	0.570	1.028	55.5	<0.050	0.730	1.063	68.7	<0.050
Carbofuran	0.780	1.028	75.9	<0.050	0.770	1.063	72.5	<0.050
Chlorothalonil	0.140	1.028	13.6	<0.050	0.050	1.063	4.7	<0.050
Dicamba	0.390	1.069	36.5	0.280	0.370	1.106	33.5	<0.050
Esfenvalerate	<0.050	NS	--	<0.050	<0.050	NS	--	<0.050
Linuron	0.680	0.545	124.8	<0.050	0.530	o.563	94.1	<0.050
MCPB	<0.050	NS	--	<0.050	<0.050	NS	--	<0.050
Methomyl	0.730	1.038	70.3	<0.050	0.760	1.074	70.8	<0.050
Norflurazon	<0.050	NS	--	<0.050	<0.050	NS	--	<0.050
Oxamyl	0.420	1.038	40.5	0.070	0.500	1.074	46.6	<0.050
Propham	E0.220	0.452	48.6	--	E0.220	0.468	47.0	<0.050
Triclopyr	<0.050	NS	--	<0.050	<0.050	NS	--	<0.050
Carbofuran, 3-hydroxy-	<0.050	NS	--	<0.050	<0.050	NS	--	<0.050
BDMC (surrogate)	94.00	80.03	117.5	5.000	101.0	80.06	126.2	--

Table 46. Concentrations of pesticides analyzed by high performance liquid gas chromatography in field matrix spikes of filtered water samples from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

[NS, analyte not in spike solution; <, less than; E, estimate; --, not calculated; concentrations in micrograms per liter; computed concentration, ((spike volume * spike concentration)/sample volume) + native water concentration; measured concentration, value from laboratory analysis; percent recovery, (measured concentration/computed concentration) * 100; Chlorothalonil, DNOC, Dichlobenil, Esfenvalerate, and 1-Naphthol are selected for removal from schedule 2051 or for qualitative reporting]

Type sample Station Date	Field matrix spike 5 14211720 94-10-25			Field matrix spike 6 14211720 94-10-25			Field matrix spike 7 14211720 94-10-25			Field matrix spike 8 14211720 94-10-25			Field matrix spike 9 14211720 94-10-25		
Analyte	Measured concen-tration	Computed concen-tration	Percent recovery	Measured concen-tration	Computed concen-tration	Percent recovery	Measured concen-tration	Computed concen-tration	Percent recovery	Measure concen-tration	Computed concen-tration	Percent recovery	Measured concen-tration	Computed concen-tration	Percent recovery
Dinoseb	0.140	0.284	49.4	0.180	0.287	62.7	0.260	0.580	44.9	0.270	0.596	45.3	0.530	1.179	45.0
DNOC	0.140	0.213	65.6	0.190	0.216	88.0	0.260	0.436	59.6	0.250	0.448	55.8	0.360	.887	40.6
Dichlobenil	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--
2, 4 -DB	0.200	0.377	53.1	0.230	0.381	60.4	0.280	0.770	36.4	0.300	0.791	38.0	0.520	1.565	33.2
2, 4, 5-T	--	0.251	--	--	0.254	--	--	0.513	--	--	0.527	--	--	1.043	--
Aldicarb	0.060	0.233	25.7	<0.050	0.236	0.0	0.080	0.477	16.8	0.070	0.490	14.3	0.060	0.970	6.2
Aldicarb sulfone	0.090	0.269	33.5	0.100	0.272	36.8	0.150	0.548	27.3	0.210	0564	37.2	0.290	1.116	26.0
Bromacil	0.260	0.246	105.7	0.220	0.249	88.4	0.390	0.503	77.6	0.420	0.516	81.3	0.850	1.022	83.2
Carbaryl	0.160	0.243	65.7	0.170	0.246	69.0	0.320	0.498	64.3	0.320	0.511	62.6	0.690	1.012	68.2
Chloramben	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--
Clopyralid	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--
Diuron	E0.220	0.595	37.0	E0.180	0.599	30.1	E0.370	0.933	39.7	E0.410	0.951	43.1	E0.900	1.616	55.7
Fluometuron	0.190	0.256	74.2	0.200	0.259	77.2	0.350	0.523	66.9	0.380	0.538	70.7	0.800	1.064	75.2
MCPA	0.170	0.276	61.6	0.210	0.279	75.2	0.320	0.564	56.7	0.310	0.580	53.5	0.600	1.147	52.3
Methiocarb	0.150	0.251	59.8	0.130	0.254	51.3	0.300	0.513	58.5	0.290	0.527	55.0	0.700	1.043	67.1
1-Naphthol	<0.050	0.251	0.0	<0.050	0.254	0.0	<0.050	0.513	0.0	<0.050	0.527	0.0	<0.050	1.043	0.0
Oryzalin	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--
Picloram	--	0.261	--	--	0.264	--	--	0.534	--	--	0.548	--	--	1.085	--
Silvex	0.170	0.259	65.8	0.190	0.262	72.6	0.310	0.528	58.7	0.300	0.543	55.3	0.600	1.074	55.9
Dacthal, mono-acid-	--	NS	--	--	NS	--	--	NS	--	--	NS	--	--	NS	--
Propoxur	0.150	0.266	56.4	0.140	0.269	52.0	0.320	0.544	58.9	0.300	0.559	53.7	0.740	1.106	66.9

Table 46. Concentrations of pesticides analyzed by high performance liquid gas chromatography in field matrix spikes of filtered water samples from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994—Continued

Type sample Station Date	Field matrix spike 5 14211720 94-10-25			Field matrix spike 6 14211720 94-10-25			Field matrix spike 7 14211720 94-10-25			Field matrix spike 8 14211720 94-10-25			Field matrix spike 9 14211720 94-10-25		
Analyte	Measured concen-tration	Computed concen-tration	Percent recovery	Measured concen-tration	Computed concen-tration	Percent recovery	Measured concen-tration	Computed concen-tration	Percent recovery	Measure concen-tration	Computed concen-tration	Percent recovery	Measured concen-tration	Computed concen-tration	Percent recovery
Dichlorprop	0.200	0.266	75.2	0.260	0.269	96.6	0.350	0.544	64.4	0.340	0.559	60.9	0.650	1.106	58.8
Neburon	0.160	0.261	61.3	0.140	0.264	53.0	0.360	0.534	67.5	0.370	0.548	67.5	0.770	1.085	71.0
Fenuron	E0.350	0.276	126.8	E0.390	0.279	139.6	E0.710	0.564	125.8	E0.740	0.580	127.7	E1.600	1.147	139.5
2, 4 -D	0.170	0.241	70.6	0.170	0.244	69.7	0.310	0.492	62.9	0.290	0.506	57.3	0.590	1.001	58.9
Acifluorfen	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--
Aldicarb sulfoxide	0.280	0.251	111.6	0.230	0.254	90.7	0.440	0.513	85.8	0.520	0.527	98.7	0.990	1.043	94.9
Bentazon	0.170	0.274	62.1	0.130	0.277	47.0	0.260	0.559	46.5	0.270	0.574	47.0	0.570	1.137	50.1
Bromoxynil	0.160	0.251	63.7	0.170	0.254	67.0	0.290	0.513	56.6	0.290	0.527	55.0	0.600	1.043	57.5
Carbofuran	0.430	0.251	171.3	E0.330	0.254	130.2	0.640	0.513	124.8	0.670	0.527	127.2	1.200	1.043	115.1
Chlorothalonil	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--
Dicamba	0.090	0.261	34.5	0.080	0.264	30.3	0.100	0.534	18.7	0.160	0.548	29.2	0.440	1.085	40.6
Esfenvalerate	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--
Linuron	0.190	0.133	142.8	0.170	0.135	126.3	0.340	0.272	125.1	0.370	0.279	132.5	0.780	0.553	141.1
MCPB	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--
Methomyl	0.160	0.254	63.1	0.170	0.257	66.3	0.320	0.518	61.8	0.350	0.532	65.8	0.740	1.053	70.2
Norflurazon	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--
Oxamyl	0.110	0.254	43.4	0.100	0.257	39.0	0.190	0.518	36.7	0.210	0.532	39.5	0.500	1.053	47.5
Propham	E0.190	0.110	172.0	E0.200	0.112	179.0	E0.160	0.226	70.9	E0.410	0.232	176.8	E0.320	0.459	69.7
Triclopyr	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--
Carbofuran, 3-hydroxy	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--	<0.050	NS	--
BDMC (surrogate)	104.0	136.3	76.3	76.00	136.3	55.8	146.0	136.5	106.9	114.0	136.5	83.5	134.0	137.0	97.8

Table 47. Concentrations of triazine compounds in split samples from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

[USGS laboratory schedule 8015; concentrations in micrograms per liter; ND, no detection; E, estimate; --, not calculated]

Sample type	Split 1		Split 2		Split 3	
Station	14202000		444349123094000		445547123065400	
Date	94-10-29		94-05-16		94-05-26	
Analyte	Sample 1	Sample 2	Sample 1	Sample 2	Sample 1	Sample 2
Desisopropylatrzine	0.002	0.003	ND	ND	ND	ND
Desethylatrazine	0.002	0.003	ND	ND	0.005	0.002
Simazine	0.056	0.060	0.001	ND	0.038	0.002
Prometon	ND	0.001	ND	ND	0.007	ND
Atrazine	0.041	0.044	0.031	0.030	0.026	0.024
Propazine	ND	ND	ND	ND	ND	ND
Metribuzin	0.001	0.002	ND	ND	ND	ND
Ametryn	ND	ND	ND	ND	ND	ND
Alachlor	ND	ND	ND	ND	ND	ND
Prometryn	ND	ND	ND	ND	ND	ND
Metolachlor	0.035	0.039	0.002	0.001	0.010	0.053
Cyanazine	ND	ND	ND	ND	ND	ND
Butylate	ND	ND	ND	ND	ND	ND
Vernolate	ND	ND	ND	ND	ND	ND
Propachlor	0.003	0.003	ND	ND	ND	ND
Cycloate	0.002	0.003	0.003	0.002	0.004	0.002
Trifluralin	0.000	0.000	ND	ND	ND	ND
Terbacil	0.006	0.007	0.009	0.007	ND	0.269
Simetryn	0.000	0.000	ND	ND	ND	ND
Bromacil	0.010	ND	ND	ND	ND	ND
Diphenamid	ND	ND	ND	ND	ND	ND
Butachlor	ND	ND	ND	ND	ND	ND
Carboxin	ND	ND	ND	ND	ND	ND
Hexazinone	0.003	0.004	0.002	ND	0.002	ND
Terbuthylazine (surrogate)	0.123	0.116	0.227	0.232	0.239	0.207

Table 48. Concentrations of triazine compounds in field matrix spikes of filtered water samples from Phase II of the Willamette River Basin Water Quality Study, Oregon, 1994

[USGS laboratory schedule 8015; concentrations in micrograms per liter; NS, analyte not in spike solution; ND, no detection; --, not calculated; computed concentration, ((spike volume * spike concentration)/sample volume) + native water concentration; measured concentration, value from laboratory analysis; percent recovery, (measured concentration/computed concentration) * 100]

Sample type	Field matrix spike 1			Field matrix spike 2			Field matrix spike 3			Field matrix spike 4		
Station	14206298			14206298			451502122524700			452823122240900		
Date	94-11-23			94-11-23			94-05-26			94-11-03		
Analyte	Measured concentration	Computed concentration	Percent recovery	Measured concentration	Computed concentration	Percent recovery	Measured concentration	Computed concentration	Percent recovery	Measured concentration	Computed concentration	Percent recovery
Desisopropylatrazine	0.006	NS	--	0.007	NS	--	0.006	NS	--	0.001	NS	--
Desethylatrazine	0.001	NS	--	0.002	NS	--	0.032	NS	--	0.003	NS	--
Simazine	0.256	0.437	59	0.207	0.466	44	0.121	0.191	63	0.073	0.202	36
Prometon	0.066	0.192	34	0.098	0.220	45	0.083	0.108	77	0.099	0.187	53
Atrazine	0.074	0.189	39	0.105	0.216	48	0.130	0.179	73	0.124	0.193	64
Propazine	0.065	0.146	45	0.094	0.168	56	ND	0.085	0	0.097	0.146	66
Metribuzin	0.003	NS	--	0.003	NS	--	0.059	NS	--	ND	NS	--
Ametryn	0.079	0.181	44	0.112	0.209	54	0.003	0.108	3	0.117	0.181	65
Alachlor	ND	NS	--	ND	NS	--	0.077	NS	--	ND	NS	--
Prometryn	0.081	0.165	49	0.117	0.191	61	ND	0.096	0	0.112	0.165	68
Metolachlor	0.001	NS	--	0.001	NS	--	0.222	NS	--	0.055	NS	--
Cyanazine	ND	NS	--	ND	NS	--	0.068	NS	--	0.001	NS	--
Butylate	ND	NS	--	ND	NS	--	0.063	NS	--	ND	NS	--
Vernolate	ND	NS	--	ND	NS	--	ND	NS	--	ND	NS	--
Propachlor	ND	NS	--	ND	NS	--	0.055	NS	--	ND	NS	--
Cycloate	ND	NS	--	ND	NS	--	0.001	NS	--	ND	NS	--
Trifluralin	ND	NS	--	ND	NS	--	0.044	NS	--	0.001	NS	--
Terbacil	ND	NS	--	ND	NS	--	0.077	NS	--	0.005	NS	--
Simetryn	0.000	NS	--	0.001	NS	--	ND	NS	--	ND	NS	--
Bromacil	0.017	NS	--	ND	NS	--	ND	NS	--	ND	NS	--
Diphenamid	ND	NS	--	ND	NS	--	ND	NS	--	0.001	NS	--
Butachlor	ND	NS	--	ND	NS	--	ND	NS	--	ND	NS	--
Carboxin	ND	NS	--	ND	NS	--	0.001	NS	--	ND	NS	--
Hexazinone	ND	NS	--	ND	NS	--	0.007	NS	--	0.012	NS	--
Terbuthylazine	0.113	NS	--	0.152	NS	--	0.217	NS	--	0.145	NS	--

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APPENDIX

Appendix— U.S. Environmental Protection Agency STOage and RETrieval (STORET) codes and minimum reporting level (MRL) or method detection limit (MDL) (Schedules 8308, 2010, and 8015) for constituents analyzed during Phases I and II of the Willamette River Basin Water Quality Study, Oregon, 1992–94 [Source: Timme, 1994]

STORET Code	Constituent	MRL/ MDL	
Ancillary data (Phases I and II):			
00010	Water temperature	0.5	degrees C
00025	Air pressure	1	mm of Hg
00061	Discharge, instantaneous	1	ft^3 / sec
80154	Concentration,suspended sediment	1	mg/L
70331	Sediment-suspend, sieved <63µm		percent
00095	Specific conductance	1	µs/cm at 25°C
00300	Oxygen, dissolved	.1	mg/L
00301	Oxygen, dissolved		percent of saturation
00400	pH, field	.1	Standard Units
00681	Carbon, organic, dissolved	.1	mg/L as C
00689	Carbon, organic, suspended	.1	mg/L as C
00915	Calcium, dissolved	.1	mg/L as Ca
00925	Magnesium, dissolved	.1	mg/L as Mg
00900	Hardness, total	.1	mg/L as $CaCO_3$
Nutrients [Schedule 2702] (Phases I and II):			
00608	Nitrogen, ammonia, dissolved	0.01	mg/L as N
00613	Nitrogen, nitrite, dissolved	.01	mg/L as N
00623	Nitrogen, ammonia plus organic, dissolved	.2	mg/L as N
00625	Nitrogen, ammonia plus organic, total	.2	mg/L as N
00631	Nitrite plus nitrate, dissolved	.05	mg/L as N
00665	Phosphorus, total	.01	mg/L as P
00666	Phosphorus, dissolved	.01	mg/L as P
00671	Phosphorus, ortho-, dissolved	.01	mg/L as P
Trace elements in whole water (Phase I):			
01097	Antimony, total	1	µg/L as Sb
01002	Arsenic, total	1	µg/L as As
01012	Beryllium, total	10	µg/L as Be
01022	Boron, total	10	µg/L as B
01027	Cadmium, total	1	µg/L as Cd
01034	Chromium, total	1	µg/L as Cr
01037	Cobalt, total	1	µg/L as Co
01042	Copper, total	1	µg/L as Cu
01045	Iron, total	10	µg/L as Fe
01051	Lead, total	1	µg/L as Pb
01055	Manganese, total	10	µg/L as Mn
71900	Mercury, total	.1	µg/L as Hg
01067	Nickel, total	1	µg/L as Ni
01147	Selenium, total	1	µg/L as Se
01077	Silver, total	1	µg/L as Ag
01092	Zinc, total	10	µg/L as Zn
Trace elements in whole water(Phase II):			
01002	Arsenic	1	µg/L as As
01027	Cadmium	1	µg/L as Cd
01034	Chromium	1	µg/L as Cr
01042	Copper	1	µg/L as Cu
01051	Lead	1	µg/L as Pb
71900	Mercury	.1	µg/L as Hg
01067	Nickel	1	µg/L as Ni
01092	Zinc	10	µg/L as Zn
Trace elements in filtered water (Phase I):			
01095	Antimony, dissolved	1	µg/L as Sb
01000	Arsenic, dissolved	1	µg/L as As
01010	Beryllium, dissolved	10	µg/L as Be
01020	Boron, dissolved	10	µg/L as B
01025	Cadmium, dissolved	.1	µg/L as Cd
01030	Chromium, dissolved	.5	µg/L as Cr
01035	Cobalt, dissolved	.5	µg/L as Co
01040	Copper, dissolved	.5	µg/L as Cu
01046	Iron, dissolved	10	µg/L as Fe
01049	Lead, dissolved	.5	µg/L as Pb
01056	Manganese, dissolved	.2	µg/L as Mn
71890	Mercury, dissolved	.1	µg/L as Hg
01065	Nickel, dissolved	1	µg/L as Ni
01145	Selenium, dissolved	1	µg/L as Se
01075	Silver, dissolved	1	µg/L as Ag
01090	Zinc, dissolved	.5	µg/L as Zn
Trace elements in filtered water [Schedule 2703] (Phase II):			
01106	Aluminum	1	µg/L as Al
01095	Antimony	1	µg/L as Sb
01000	Arsenic	1	µg/L as As
01005	Barium	1	µg/L as Ba
01010	Beryllium	1	µg/L as Be
01025	Cadmium	1	µg/L as Cd
01030	Chromium	1	µg/L as Cr
01035	Cobalt	1	µg/L as Co
01040	Copper	1	µg/L as Cu
01049	Lead	1	µg/L as Pb
01056	Manganese	1	µg/L as Mn
01060	Molybdenum	1	µg/L as Mo
01065	Nickel	1	µg/L as Ni
01145	Selenium	1	µg/L as Se
01075	Silver	1	µg/L as Ag
01090	Zinc	1	µg/L as Zn
22703	Uranium	1	µg/L as U

Appendix—U.S. Environmental Protection Agency STOage and RETrieval (STORET) codes and minimum reporting level (MRL) or method detection limit (MDL) (Schedules 8308, 2010, and 8015) for constituents analyzed during Phases I and II of the Willamette River Basin Water Quality Study, Oregon, 1992-94—Continued

STORET Code	Constituent	MRL/ MDL	
Trace elements in bed sediment [Schedule 2400] (Phase I):			
49269	Carbon, inorganic (<63um)	0.01	percent
49266	Carbon, organic (<63um)	0.01	percent
49267	Carbon, organic + inorganic (<63um)	0.01	percent
34790	Aluminum	0.05	percent
34795	Antimony	.1	µg/g
34800	Arsenic	.1	µg/g
34805	Barium	1	µg/g
34810	Beryllium	1	µg/g
34816	Bismuth	10	µg/g
34825	Cadmium	.1	µg/g
34830	Calcium	.05	percent
34835	Cerium	4	µg/g
34845	Cobalt	1	µg/g
34840	Chromium	1	µg/g
34850	Copper	1	µg/g
34855	Europium	2	µg/g
34860	Gallium	4	µg/g
34870	Gold	8	µg/g
34875	Holmium	4	µg/g
34880	Iron	.05	percent
34885	Lanthanum	2	µg/g
34890	Lead	4	µg/g
34895	Lithium	2	µg/g
34905	Manganese	4	µg/g
34900	Magnesium	.005	percent
34910	Mercury	.02	µg/g
34915	Molybdenum	2	µg/g
34930	Niobium	4	µg/g
34920	Neodymium	4	µg/g
34925	Nickel	2	µg/g
34935	Phosphorus	.005	percent
34940	Potassium	.05	percent
34945	Scandium	2	µg/g
34950	Selenium	.1	µg/g
34955	Silver	.1	µg/g
34960	Sodium	.005	percent
34965	Strontium	2	µg/g
34970	Sulfur	.005	percent
34975	Tantalum	40	µg/g
34985	Tin	10	µg/g
49274	Titanium	.005	percent
34980	Thorium	4	µg/g
35000	Uranium	.05	µg/g
35005	Vanadium	2	µg/g
35010	Yttrium	2	µg/g
35015	Ytterbium	1	µg/g
35020	Zinc	4	µg/g
Organochlorine and organophosphorus compounds in whole water [Schedule 1399] (Phase I):			
	Organochlorine		
39330	Aldrin, total	0.001	µg/L
39350	Chlordane, total	.1	µg/L
39360	DDD, total	.001	µg/L
39365	DDE, total	.001	µg/L
39370	DDT, total	.001	µg/L
39380	Dieldrin, total	.001	µg/L
39388	Endosulfan I, total	.001	µg/L
39390	Endrin, total	.001	µg/L
39410	Heptachlor, total	.001	µg/L
39420	Heptachlor epoxide, total	.001	µg/L
39340	Lindane, total	.001	µg/L
39480	Methoxychlor, total	.01	µg/L
39755	Mirex, total	.01	µg/L
39516	PCB, total	.1	µg/L
39250	PCN, total	.1	µg/L
39034	Perthane, total	.01	µg/L
39400	Toxaphene, total	1	µg/L
	Organophosphorus		
39570	Diazinon, total	0.01	µg/L
39398	Ethion, total	.01	µg/L
39530	Malathion, total	.01	µg/L
39600	Methyl Parathion, total	.01	µg/L
39540	Parathion, total	.01	µg/L
39786	Trithion, total	.01	µg/L
Organochlorine compounds in whole water [Schedule 1398] (Phase II):			
39330	Aldrin, total	0.001	µg/L
39360	DDD, total	.001	µg/L
39365	DDE, total	.001	µg/L
39370	DDT, total	.001	µg/L
39380	Dieldrin, total	.001	µg/L
39350	Chlordane, total	.1	µg/L
39388	Endosulfan I, total	.001	µg/L
39390	Endrin, total	.001	µg/L
39410	Heptachlor, total	.001	µg/L
39420	Heptachlor epoxide, total	.001	µg/L
39340	Lindane, total	.001	µg/L
39480	Methoxychlor, total	.01	µg/L
39755	Mirex, total	.01	µg/L
39034	Perthane, total	.1	µg/L
39516	PCB, total	.1	µg/L

Appendix—U.S. Environmental Protection Agency STOage and RETrieval (STORET) codes and minimum reporting level (MRL) or method detection limit (MDL) (Schedules 8308, 2010, and 8015) for constituents analyzed during Phases I and II of the Willamette River Basin Water Quality Study, Oregon, 1992-94—Continued

STORET Code	Constituent	MRL/ MDL	
39250	PCN, total	0.1	µg/L
39400	Toxaphene, total	1	µg/L
Organochlorine and organophosphorus compounds in filtered water [Schedule 8307] (Phase I):			
	Organochlorine		
39331	Aldrin, dissolved	0.001	µg/L
39352	Chlordane, dissolved	.1	µg/L
39361	DDD, dissolved	.001	µg/L
39366	DDE, dissolved	.001	µg/L
39371	DDT, dissolved	.001	µg/L
39381	Dieldrin, dissolved	.001	µg/L
82354	Endosulfan I, dissolved	.001	µg/L
39391	Endrin, dissolved	.001	µg/L
39411	Heptachlor, dissolved	.001	µg/L
39421	Heptachlor epoxide, dissolved	.001	µg/L
39341	Lindane, dissolved	.001	µg/L
82350	Methoxychlor, dissolved	.01	µg/L
39756	Mirex, dissolved	.01	µg/L
39517	PCB, dissolved	.1	µg/L
82360	PCN, dissolved	.1	µg/L
82348	Perthane, dissolved	.1	µg/L
39401	Toxaphene, dissolved	1	µg/L
	Organophosphorus		
38933	Chlorpyrifos, dissolved	0.01	µg/L
39572	Diazinon, dissolved	.01	µg/L
82346	Ethion, dissolved	.01	µg/L
04095	Fonofos, dissolved	.01	µg/L
39532	Malathion, dissolved	.01	µg/L
39602	Methyl Parathion, dissolved	.01	µg/L
39542	Parathion, dissolved	.01	µg/L
82342	Trithion, dissolved	.01	µg/L
Organochlorine compounds in filtered water [Schedule 8369] (Phase II):			
39331	Aldrin, dissolved	0.001	µg/L
39352	Chlordane, dissolved	.1	µg/L
39361	DDD, dissolved	.001	µg/L
39366	DDE, dissolved	.001	µg/L
39371	DDT, dissolved	.001	µg/L
39381	Dieldrin, dissolved	.001	µg/L
82354	Endosulfan I, dissolved	.001	µg/L
39391	Endrin, dissolved	.001	µg/L
39411	Heptachlor, dissolved	.001	µg/L
39421	Heptachlor epoxide, dissolved	.001	µg/L
39341	Lindane, dissolved	.001	µg/L
82350	Methoxychlor, dissolved	.01	µg/L
39756	Mirex, dissolved	0.01	µg/L
39517	PCB, dissolved	.1	µg/L
82360	PCN, dissolved .	1	µg/L
82348	Perthane, dissolved	.1	µg/L
39401	Toxaphene, dissolved	1	µg/L
Organochlorine and organophosphorus compounds in suspended sediment [Schedule 8308] (Phase I):			
	Organochlorine		
39332	Aldrin, suspended	0.001	µg/L
39353	Chlordane, suspended	.1	µg/L
39362	DDD, suspended	.001	µg/L
39367	DDE, suspended	.001	µg/L
39372	DDT, suspended	.001	µg/L
39382	Dieldrin, suspended	.001	µg/L
82355	Endosulfan I, suspended	.001	µg/L
39392	Endrin, suspended	.001	µg/L
39412	Heptachlor, suspended	.001	µg/L
39422	Heptachlor epoxide, suspended	.001	µg/L
39342	Lindane, suspended	.001	µg/L
82351	Methoxychlor, suspended	.01	µg/L
39757	Mirex, suspended	.01	µg/L
39518	PCB, suspended	.1	µg/L
82361	PCN, suspended	.1	µg/L
82349	Perthane, suspended	.1	µg/L
39402	Toxaphene, suspended	1	µg/L
	Organophosphorus		
39573	Diazinon, suspended	0.01	µg/L
82347	Ethion, suspended	.01	µg/L
39533	Malathion, suspended	.01	µg/L
39603	Methyl Parathion, suspended	.01	µg/L
39543	Parathion, suspended	.01	µg/L
82343	Trithion, suspended	.01	µg/L
Organochlorine compounds in suspended sediment [Schedule 8370] (Phase II):			
39332	Aldrin, suspended	0.001	µg/L
39353	Chlordane, suspended	.1	µg/L
39362	DDD, suspended	.001	µg/L
39367	DDE, suspended	.001	µg/L
39372	DDT, suspended	.001	µg/L
39382	Dieldrin, suspended	.001	µg/L
82355	Endosulfan I, suspended	.001	µg/L
39392	Endrin, suspended	.001	µg/L
39412	Heptachlor, suspended	.001	µg/L
39422	Heptachlor epoxide, suspended	.001	µg/L
39342	Lindane, suspended	.001	µg/L

Appendix—U.S. Environmental Protection Agency STOage and RETrieval (STORET) codes and minimum reporting level (MRL) or method detection limit (MDL) (Schedules 8308, 2010, and 8015) for constituents analyzed during Phases I and II of the Willamette River Basin Water Quality Study, Oregon, 1992-94—Continued

STORET Code	Constituent	MRL/ MDL	
82351	Methoxychlor, suspended	.01	µg/L
39757	Mirex, suspended	.01	µg/L
39518	PCB, suspended	.1	µg/L
82361	PCN, suspended	.1	µg/L
82349	Perthane, suspended	.1	µg/L
39402	Toxaphene, suspended	1	µg/L
Organochlorine compounds in bed sediment [Schedule 2501] (Phase I):			
49271	Carbon, organic (<2mm)	0.1	g/kg
49270	Carbon, inorganic (<2mm)	0.1	g/kg
49272	Carbon, organic + inorganic (<2mm)	0.1	g/kg
80164	Sediment-bed, sieved (<2mm)		percent
	Aldrin	1	µg/kg
	alpha-HCH	1	µg/kg
	beta-HCH	1	µg/kg
	trans-Chlordane	1	µg/kg
	cis-Chlordane	1	µg/kg
	Chloroneb	5	µg/kg
	cis-Nonachlor	1	µg/kg
	cis-Permethrin	5	µg/kg
	Hexachlorobenzene	1	µg/kg
	DCPA	5	µg/kg
	p,p'-DDD	1	µg/kg
	o,p'-DDD	1	µg/kg
	o,p'-DDE	1	µg/kg
	p,p'-DDE	1	µg/kg
	p,p'-DDT	2	µg/kg
	o,p'-DDT	2	µg/kg
	Dieldrin	1	µg/kg
	Endosulfan I	1	µg/kg
	Endrin	2	µg/kg
	Heptachlor epoxide	1	µg/kg
	Heptachlor	1	µg/kg
	Isodrin	1	µg/kg
	Lindane (gamma-HCH)	1	µg/kg
	Mirex	1	µg/kg
	o,p'-Methoxychlor	5	µg/kg
	Oxychlordane	1	µg/kg
	PCB	50	µg/kg
	Pentachloroanisole	1	µg/kg
	p,p'-Methoxychlor	5	µg/kg
	Toxaphene	200	µg/kg
	trans-Nonachlor	1	µg/kg
	trans-Permethrin	5	µg/kg

STORET Code	Constituent	MRL/ MDL	
Organic acids in whole water [Schedule 8331] (Phase I):			
39730	2,4-D	.01	µg/L
39740	2,4,5-T	.01	µg/L
49231	3,5-Dinitro Aniline	.01	µg/L
82052	Dicamba	.01	µg/L
82183	Dichlorprop (2, 4-DP)	.01	µg/L
39720	Picloram	.01	µg/L
39760	Silvex	.01	µg/L
Semi-volatile compounds in whole water [Schedule 1383] (Phase I):			
34205	Acenaphthene, total	5	µg/L
34200	Acenaphthylene, total	5	µg/L
34220	Anthracene, total	5	µg/L
34636	4-Bromophenylphenyether, total	5	µg/L
39120	Benzidine, total	40	µg/L
34526	Benzo[a]anthracene, total	10	µg/L
34247	Benzo[a]pyrene, total	10	µg/L
34230	Benzo[b]fluoranthene, total	10	µg/L
34521	Benzo[g,h,i]perylene, total	10	µg/L
34242	Benzo[k]fluoranthene, total	10	µg/L
34292	Butyl benzyl phthalate, total	5	µg/L
34278	bis-(2-Chloroethoxy) methane, total	5	µg/L
34273	bis-(2-Chloroethyl) ether, total	5	µg/L
34283	bis-(2-Chlorisopropyl) ether, total	5	µg/L
34581	2-Chloronaphthalene, total	5	µg/L
34586	2-Chlorophenol, total	5	µg/L
34641	4-Chlorophenylphenyether, total	5	µg/L
34452	4-Chloro-3-methylphenol, total	30	µg/L
34320	Chrysene, total	10	µg/L
82626	1,2-Diphenylhydrazine, total	5	µg/L
34536	1,2-Dichlorobenzene, total	5	µg/L
34566	1,3-Dichlorobenzene, total	5	µg/L
34571	1,4-Dichlorobenzene, total	5	µg/L
34601	2,4-Dichlorophenol, total	5	µg/L
34606	2,4-Dimethylphenol, total	5	µg/L
34616	2,4-Dinitrophenol, total	20	µg/L
34611	2,4-Dinitrotoluene, total	5	µg/L
34626	2,6-Dinitrotoluene, total	5	µg/L
34631	3,3-Dichlorobenzidine, total	20	µg/L
39110	Di-n-butyl phthalate, total	5	µg/L
34596	Di-n-octyl phthalate, total	10	µg/L
34556	1,2,5,6-Dibenz[a,h]anthracene, total	10	µg/L
34336	Diethyl phthalate, total	5	µg/L
34341	Dimethyl phthalate, total	5	µg/L
34657	4,6-Dinitro-2-methylphenol, total	30	µg/L
39100	bis-(2-Ethylhexyl) phthalate, total	5	µg/L

Appendix—U.S. Environmental Protection Agency STOage and RETrieval (STORET) codes and minimum reporting level (MRL) or method detection limit (MDL) (Schedules 8308, 2010, and 8015) for constituents analyzed during Phases I and II of the Willamette River Basin Water Quality Study, Oregon, 1992-94—Continued

STORET Code	Constituent	MRL/ MDL	
34376	Fluoranthene, total	5	µg/L
34381	Fluorene, total	5	µg/L
39700	Hexachlorobenzene, total	5	µg/L
39702	Hexachlorobutadiene, total	5	µg/L
34386	Hexachlorocyclopentadiene, total	5	µg/L
34396	Hexachloroethane, total	5	µg/L
34403	Indeno (1,2,3-cd) pyrene, total	10	µg/L
34408	Isophorone, total	5	µg/L
34428	n-Nitrosodi-n-propylamine, total	5	µg/L
34433	n-Nitrosodiphenylamine, total	5	µg/L
34591	2-Nitrophenol, total	5	µg/L
34646	4-Nitrophenol, total	30	µg/L
34696	Naphthalene, total	5	µg/L
34447	Nitrobenzene, total	5	µg/L
34438	n-Nitrosodimethylamine, total	5	µg/L
39032	Pentachlorophenol, total	30	µg/L
34461	Phenanthrene, total	5	µg/L
34694	Phenol, total	5	µg/L
34469	Pyrene, total	5	µg/L
34551	1,2,4-Trichlorobenzene, total	5	µg/L
34621	2,4,6-Trichlorophenol, total	20	µg/L
Semi-volatile compounds in filtered water [Schedule 8005] (Phase I):			
34206	Acenaphthene, dissolved	5	µg/L
34201	Acenaphthylene, dissolved	5	µg/L
34221	Anthracene, dissolved	5	µg/L
34637	4-Bromophenylphenyether, dissolved	5	µg/L
34239	Benzidine, dissolved	40	µg/L
34527	Benzo[a]anthracene, dissolved	10	µg/L
34248	Benzo[a]pyrene, dissolved	10	µg/L
34231	Benzo[b]fluoranthene, dissolved	10	µg/L
34522	Benzo[g,h,i]perylene, dissolved	10	µg/L
34243	Benzo[k]fluoranthene, dissolved	10	µg/L
34293	Butyl benzyl phthalate, dissolved	5	µg/L
34279	bis-(2-Chloroethoxy) methane, dissolved	5	µg/L
34274	bis-(2-Chloroethyl) ether, dissolved	5	µg/L
34284	bis-(2-Chlorisopropyl) ether, dissolved	5	µg/L
34582	2-Chloronaphthalene, dissolved	5	µg/L
34587	2-Chlorophenol, dissolved	5	µg/L
34642	4-Chlorophenylphenyether, dissolved	5	µg/L
34453	4-Chloro-3-methylphenol, dissolved	30	µg/L
34321	Chrysene, dissolved	10	µg/L
34347	1,2-Diphenylhydrazine, dissolved	5	µg/L
34537	1,2-Dichlorobenzene, dissolved	5	µg/L
34567	1,3-Dichlorobenzene, dissolved	5	µg/L
34572	1,4-Dichlorobenzene, dissolved	5	µg/L
34602	2,4-Dichlorophenol, dissolved	5	µg/L
34617	2,4-Dinitrophenol, dissolved	20	µg/L
34612	2,4-Dinitrotoluene, dissolved	5	µg/L
34627	2,6-Dinitrotoluene, dissolved	5	µg/L
34632	3,3-Dichlorobenzidine, dissolved	20	µg/L
34327	Di-n-butyl phthalate, dissolved	5	µg/L
34597	Di-n-octyl phthalate, dissolved	10	µg/L
34557	1,2,5,6-Dibenz[a,h]anthracene, dissolved	10	µg/L
34337	Diethyl phthalate, dissolved	5	µg/L
34342	Dimethyl phthalate, dissolved	5	µg/L
34607	2,4-Dimethyl phenol	5	µg/L
34658	4,6-Dinitro-2-methylphenol, dissolved	30	µg/L
39103	bis-(2-Ethylhexyl) phthalate, dissolved	5	µg/L
34377	Fluoranthene, dissolved	5	µg/L
34382	Fluorene, dissolved	5	µg/L
34401	Hexachlorobenzene, dissolved	5	µg/L
34392	Hexachlorobutadiene, dissolved	5	µg/L
34387	Hexachlorocyclopentadiene, dissolved	5	µg/L
34397	Hexachloroethane, dissolved	5	µg/L
34404	Indeno (1,2,3-cd) pyrene, dissolved	10	µg/L
34409	Isophorone, dissolved	5	µg/L
34429	n-Nitrosodi-n-propylamine, dissolved	5	µg/L
34434	n-Nitrosodiphenylamine, dissolved	5	µg/L
34592	2-Nitrophenol, dissolved	5	µg/L
34647	4-Nitrophenol, dissolved	30	µg/L
34443	Naphthalene, dissolved	5	µg/L
34448	Nitrobenzene, dissolved	5	µg/L
34439	n-Nitrosodimethylamine, dissolved	5	µg/L
34459	Pentachlorophenol, dissolved	30	µg/L
34462	Phenanthrene, dissolved	5	µg/L
34470	Pyrene, dissolved	5	µg/L
34552	1,2,4-Trichlorobenzene, dissolved	5	µg/L
34622	2,4,6-Trichlorophenol, dissolved	20	µg/L
Semi-volatile compounds in suspended sediment [Schedule 8006] (Phase I):			
34207	Acenaphthene, suspended	5	µg/L
34202	Acenaphthylene, suspended	5	µg/L
34222	Anthracene, suspended	5	µg/L
34638	4-Bromophenylphenyether, suspended	5	µg/L
34240	Benzidine, suspended	40	µg/L
34528	Benzo[a]anthracene, suspended	10	µg/L
34249	Benzo[a]pyrene, suspended	10	µg/L
34232	Benzo[b]fluoranthene, suspended	10	µg/L
34523	Benzo[g,h,i]perylene, suspended	10	µg/L
34244	Benzo[k]fluoranthene, suspended	10	µg/L
34294	Butyl benzyl phthalate, suspended	5	µg/L
34280	bis-(2-Chloroethoxy) methane, suspended	5	µg/L
34275	bis-(2-Chloroethyl) ether, suspended	5	µg/L

Appendix—U.S. Environmental Protection Agency STOage and RETrieval (STORET) codes and minimum reporting level (MRL) or method detection limit (MDL) (Schedules 8308, 2010, and 8015) for constituents analyzed during Phases I and II of the Willamette River Basin Water Quality Study, Oregon, 1992-94—Continued

STORET Code	Constituent	MRL/ MDL	
34285	bis-(2-Chlorisopropyl) ether, suspended	5	µg/L
34583	2-Chloronaphthalene, suspended	5	µg/L
34588	2-Chlorophenol, suspended	5	µg/L
34643	4-Chlorophenylphenyether, suspended	5	µg/L
34454	4-Chloro-3-methylphenol, suspended	30	µg/L
34322	Chrysene, suspended	10	µg/L
34348	1,2-Diphenylhydrazine, suspended	5	µg/L
34538	1,2-Dichlorobenzene, suspended	5	µg/L
34568	1,3-Dichlorobenzene, suspended	5	µg/L
34573	1,4-Dichlorobenzene, suspended	5	µg/L
34603	2,4-Dichlorophenol, suspended	5	µg/L
34618	2,4-Dinitrophenol, suspended	20	µg/L
34613	2,4-Dinitrotoluene, suspended	5	µg/L
34628	2,6-Dinitrotoluene, suspended	5	µg/L
34633	3,3-Dichlorobenzidine, suspended	20	µg/L
39114	Di-n-butyl phthalate, suspended	5	µg/L
34598	Di-n-octyl phthalate, suspended	10	µg/L
34558	1,2,5,6-Dibenz[a,h]anthracene, suspended	10	µg/L
34338	Diethyl phthalate, suspended	5	µg/L
34343	Dimethyl phthalate, suspended	5	µg/L
34659	4,6-Dinitro-2-methylphenol, suspended	30	µg/L
39104	bis-(2-Ethylhexyl) phthalate, suspended	5	µg/L
34378	Fluoranthene, suspended	5	µg/L
34383	Fluorene, suspended	5	µg/L
34402	Hexachlorobenzene, suspended	5	µg/L
34393	Hexachlorobutadiene, suspended	5	µg/L
34388	Hexachlorocyclopentadiene, suspended	5	µg/L
34398	Hexachloroethane, suspended	5	µg/L
34405	Indeno (1,2,3-cd) pyrene, suspended	10	µg/L
34410	Isophorone, suspended	5	µg/L
34430	n-Nitrosodi-n-propylamine, suspended	5	µg/L
34435	n-Nitrosodiphenylamine, suspended	5	µg/L
34593	2-Nitrophenol, suspended	5	µg/L
34648	4-Nitrophenol, suspended	30	µg/L
34444	Naphthalene, suspended	5	µg/L
34449	Nitrobenzene, suspended	5	µg/L
34440	n-Nitrosodimethylamine, suspended	5	µg/L
34460	Pentachlorophenol, suspended	30	µg/L
34463	Phenanthrene, suspended	5	µg/L
34467	Phenol, suspended	5	µg/L
34471	Pyrene, suspended	5	µg/L
34553	1,2,4-Trichlorobenzene, suspended	5	µg/L
34623	2,4,6-Trichlorophenol, suspended	20	µg/L

STORET Code	Constituent	MRL/ MDL	
Semi-volatile compounds in bed sediment [Schedule 2502] (Phase I):			
49271	Carbon, organic (<2mm)	0.1	g/kg
49270	Carbon, inorganic (<2mm)	0.1	g/kg
49272	Carbon, organic + inorganic (<2mm)	0.1	g/kg
80164	Sediment-bed, sieved (<2mm)		percent
49429	Acenaphthene	50	µg/kg
49428	Acenaphthylene	50	µg/kg
49430	Acridine	50	µg/kg
49424	C8-Alkylphenol	50	µg/kg
49434	Anthracene	50	µg/kg
49437	Anthraquinone	50	µg/kg
49443	Azobenzene	50	µg/kg
49391	2,2’-Biquinoline	50	µg/kg
49401	bis-(2-Chloroethoxy)methane	50	µg/kg
49454	4-Bromophenyl-phenylether	50	µg/kg
49436	Benz[a]anthracene	50	µg/kg
49458	Benzo[b]fluoranthene	50	µg/kg
49408	Benzo[g,h,i]perylene	50	µg/kg
49397	Benzo[k]fluoranthene	50	µg/kg
49468	Benzo[c]quinoline	50	µg/kg
49389	Benzo[a]pyrene	50	µg/kg
49426	bis-(2-Ethylhexyl)phthalate	50	µg/kg
49427	Butylbenzylphthalate	50	µg/kg
49438	1,2,4-Trichlorobenzene	50	µg/kg
49467	2-Chlorophenol	50	µg/kg
49407	2-Chloronaphthalene	50	µg/kg
49455	4-Chlorophenyl-phenylether	50	µg/kg
49450	Chrysene	50	µg/kg
49446	Pentachloronitrobenzene	50	µg/kg
49343	Hexachlorobenzene	50	µg/kg
49439	1,2-Dichlorobenzene	50	µg/kg
49441	1,3-Dichlorobenzene	50	µg/kg
49442	1,4-Dichlorobenzene	50	µg/kg
49395	2,4-Dinitrotoluene	50	µg/kg
49396	2,6-Dinitrotoluene	50	µg/kg
49421	3,5-Dimethylphenol	50	µg/kg
49452	Dibenzothiophene	50	µg/kg
49381	Di-n-butylphthalate	50	µg/kg
49461	Dibenz[a,h]anthracene	50	µg/kg
49383	Diethylphthalate	50	µg/kg
49384	Dimethylphthalate	50	µg/kg
49382	Di-n-octylphthalate	50	µg/kg
49490	2-Ethylnapthalene	50	µg/kg
49466	Fluoranthene	50	µg/kg
49449	9H-Carbazole	50	µg/kg
49399	9H-Fluorene	50	µg/kg

Appendix—U.S. Environmental Protection Agency STOage and RETrieval (STORET) codes and minimum reporting level (MRL) or method detection limit (MDL) (Schedules 8308, 2010, and 8015) for constituents analyzed during Phases I and II of the Willamette River Basin Water Quality Study, Oregon, 1992-94—Continued

STORET Code	Constituent	MRL/ MDL
49390	Indeno[1,2,3-cd]pyrene	50 µg/kg
49394	Isoquinoline	50 µg/kg
49400	Isophorone	50 µg/kg
49403	1,2-Dimethylnaphthalene	50 µg/kg
49404	1,6-Dimethylnaphthalene	50 µg/kg
49398	1-Methyl-9H-fluorene	50 µg/kg
49410	1-Methylphenanthrene	50 µg/kg
49388	1-Methylpyrene	50 µg/kg
49405	2,3,6-Trimethylnaphthalene	50 µg/kg
49406	2,6-Dimethylnaphthalene	50 µg/kg
49435	2-Methylanthracene	50 µg/kg
49411	4,5-Methylenephenanthrene	50 µg/kg
49422	4-Chloro-3-Methylphenol	50 µg/kg
49433	N-nitrosodiphenylamine	50 µg/kg
49431	N-nitrosodi-n-propylamine	50 µg/kg
49402	Naphthalene	50 µg/kg
49444	Nitrobenzene	50 µg/kg
49451	p-Cresol	50 µg/kg
49460	Pentachloroanisole	50 µg/kg
49409	Phenanthrene	50 µg/kg
49393	Phenanthridine	50 µg/kg
49413	Phenol	50 µg/kg
49387	Pyrene	50 µg/kg
49392	Quinoline	50 µg/kg
Volatile organic compounds in whole water [Schedules 1392 and 1401] (Phase I) and [Schedule 2090] (Phase II):		
34210	Acrolein (phase I only)	20 µg/L
34215	Acrylonitrile (phase I only)	20 µg/L
34030	Benzene	.2 µg/L
81555	Benzene, bromo-	.2 µg/L
77297	Methane, bromochloro-	.2 µg/L
32104	Methane, tribromo-	.2 µg/L
77275	Benzene, 1-chloro-2-methyl-	.2 µg/L
77277	Benzene, 1-chloro-4-methyl-	.2 µg/L
34576	2-Chloroethylvinylether (phase I only)	1. µg/L
32102	Methane, tetrachloro- (Carbon tetrachloride)	.2 µg/L
34301	Benzene, chloro-	.2 µg/L
32105	Methane, dibromochloro-	.2 µg/L
34311	Ethane, chloro-	.2 µg/L
32106	Methane, trichloro- (Chloroform)	.2 µg/L
34418	Methane, chloro- (Methyl chloride)	.2 µg/L
77093	Ethylene, cis-1,2-dichloro-	.2 µg/L
34704	Propene, cis-1,3-dichloro-	.2 µg/L
34501	Ethylene, 1,1-dichloro-	.2 µg/L
34496	Ethane, 1,1-dichloro-	.2 µg/L
77651	Ethane, 1,2-dibromo- (EDB)	.2 µg/L
34536	Benzene, 1,2-dichloro-	0.2 µg/L
32103	Ethane, 1,2-dichloro-	.2 µg/L
34541	Propane, 1,2-dichloro-	.2 µg/L
34566	Benzene, 1,3-dichloro-	.2 µg/L
34571	Benzene, 1,4-dichloro-	.2 µg/L
77168	Propene, 1,1-dichloro-	.2 µg/L
77173	Propane, 1,3-dichloro-	.2 µg/L
77170	Propane, 2,2-dichloro-	.2 µg/L
82625	Propane, 1,2-dibromo-3-chloro-	1. µg/L
30217	Methane, dibromo-	.2 µg/L
32101	Methane, dichlorobromo-	.2 µg/L
34668	Methane, dichlorodifluoro-	.2 µg/L
77652	Ethane, trichlorotrifluoro- (Freon 113)	.2 µg/L
34371	Benzene, ethyl-	.2 µg/L
39702	Hexachlorobutadiene	.2 µg/L
77223	Benzene, isopropyl-	.2 µg/L
34413	Methane, bromo- (Methyl bromide)	.2 µg/L
34423	Methane, dichloro-(Methylene chloride)	.2 µg/L
78032	Propene, 2-methoxy-2-methyl -(MTBE)	1. µg/L
77342	Benzene, n-butyl-	.2 µg/L
77224	Benzene, n-propyl-	.2 µg/L
34696	Naphthalene	.2 µg/L
77356	Benzene, 1-methyl-4-isopropyl-	.2 µg/L
77350	Benzene, sec-butyl-	.2 µg/L
77128	Styrene	.2 µg/L
34506	Ethane, 1,1,1-trichloro-	.2 µg/L
34516	Ethane, 1,1,2,2-tetrachloro-	.2 µg/L
34511	Ethane, 1,1,2-trichloro-	.2 µg/L
77562	Ethane, 1,1,1,2-tetrachloro-	.2 µg/L
77613	Benzene, 1,2,3-trichloro-	.2 µg/L
77443	Propane, 1,2,3-trichloro-	.2 µg/L
34551	Benzene, 1,2,4-trichloro-	.2 µg/L
77222	Benzene, 1,2,4-trimethyl-	.2 µg/L
34546	Ethylene, trans-1,2-dichloro-	.2 µg/L
77226	Benzene, 1,3,5-trimethyl-	.2 µg/L
77353	Benzene, tert-butyl-	.2 µg/L
34475	Ethylene, tetrachloro-	.2 µg/L
34010	Benzene, methyl- (Toluene)	.2 µg/L
34699	Propene, trans-1,3-dichloro-	.2 µg/L
39180	Ethylene, trichloro-	.2 µg/L
34488	Methane, trichlorofluoro-	.2 µg/L
39175	Ethylene, chloro- (Vinyl chloride)	.2 µg/L
81551	Benzene, dimethyl- (Xylene)	.2 µg/L

Appendix—U.S. Environmental Protection Agency STOage and RETrieval (STORET) codes and minimum reporting level (MRL) or method detection limit (MDL) (Schedules 8308, 2010, and 8015) for constituents analyzed during Phases I and II of the Willamette River Basin Water Quality Study, Oregon, 1992-94—Continued

STORET Code	Constituent	MRL/ MDL
	Polychlorinated dibenzo-p-dioxins (PCDD) in suspended sediment (Phase I):	
	Tetrachlorodibenzo-p-dioxin, total (TCDD)	22 pg/KL
	Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)	22 pg/KL
	Pentachlorodibenzo-p-dioxin, total (PeCDD)	34 pg/KL
	Pentachlorodibenzo-p-dioxin (1,2,3,7,8-PeCDD)	34 pg/KL
	Hexachlorodibenzo-p-dioxin, total (HxCDD)	23 pg/KL
	Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-HxCDD)	21 pg/KL
	Hexachlorodibenzo-p-dioxin (1,2,3,6,7,8-HxCDD)	23 pg/KL
	Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-HxCDD)	20 pg/KL
	Heptachlorodibenzo-p-dioxin, total (HpCDD)	76 pg/KL
	Heptachlorodibenzo-p-dioxin (1,,2,3,4,6,7,8-HpCDD)	36 pg/KL
	Octachlorodibenzo-p-dioxin (OCDD)	270 pg/KL
	Polychlorinated dibenzo-p-dioxins (PCDD) in bed sediment (Phase I):	
	Tetrachlorodibenzo-p-dioxin, total (TCDD)	0.48 - 2.4 pg/g
	Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)	.46 - 2.5 pg/g
	Pentachlorodibenzo-p-dioxin, total (PeCDD)	1.2 - 6.4 pg/g
	Pentachlorodibenzo-p-dioxin (1,2,3,7,8-PeCDD)	.30 - 5.8 pg/g
	Hexachlorodibenzo-p-dioxin, total (HxCDD)	.41- 11 pg/g
	Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-HxCDD)	.27 - 8.9 pg/g
	Hexachlorodibenzo-p-dioxin (1,2,3,6,7,8-HxCDD)	.41- 7.3 pg/g
	Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-HxCDD)	.26- 3.9 pg/g
	Heptachlorodibenzo-p-dioxin, total (HpCDD)	.39 - .51pg/g
	Heptachlorodibenzo-p-dioxin (1,,2,3,4,6,7,8-HpCDD)	.31 - .51pg/g
	Octachlorodibenzo-p-dioxin (OCDD)	.93- 2.2 pg/g
	Polychlorinated dibenzofurans (PCDF) in suspended sediment (Phase I):	
	Tetrachlorodibenzofuran, total (TCDF)	12 pg/KL
	Tetrachlorodibenzofuran (2,3,7,8-TCDF)	12 pg/KL
	Pentachlorodibenzofuran, total (PeCDF)	23 pg/KL
	Pentachlorodibenzofuran (1,2,3,7,8-PeCDF)	20 pg/KL
	Pentachlorodibenzofuran (2,3,4,7,8-PeCDF)	23 pg/KL
	Hexachlorodibenzofuran, total (HxCDF)	23 pg/KL
	Hexachlorodibenzofuran (1,2,3,4,7,8-HxCDF)	11 pg/KL
	Hexachlorodibenzofuran (1,2,3,6,7,8-HxCDF)	9 pg/KL
	Hexachlorodibenzofuran (2,3,4,6,7,8-HxCDF)	23 pg/KL
	Hexachlorodibenzofuran (1,2,3,7,8,9-HxCDF)	11 pg/KL
	Heptachlorodibenzofuran, total (HpCDF)	21 pg/KL
	Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)	19 pg/KL
	Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF)	7.2pg/KL
	Octachlorodibenzofuran (OCDF)	19 pg/KL
	Polychlorinated dibenzofurans (PCDF) in bed sediment (Phase I):	
	Tetrachlorodibenzofuran, total (TCDF)	.22 - .72 pg/g
	Tetrachlorodibenzofuran (2,3,7,8-TCDF)	.13 - .79 pg/g
	Pentachlorodibenzofuran, total (PeCDF)	.34 - 4.1 pg/g
	Pentachlorodibenzofuran (1,2,3,7,8-PeCDF)	.29 - 7.7 pg/g
	Pentachlorodibenzofuran (2,3,4,7,8-PeCDF)	.34 - 13 pg/g
	Hexachlorodibenzofuran, total (HxCDF)	.55 - 4 pg/g
	Hexachlorodibenzofuran	

Appendix—U.S. Environmental Protection Agency STOage and RETrieval (STORET) codes and minimum reporting level (MRL) or method detection limit (MDL) (Schedules 8308, 2010, and 8015) for constituents analyzed during Phases I and II of the Willamette River Basin Water Quality Study, Oregon, 1992-94—Continued

STORET Code	Constituent	MRL/ MDL	
	(1,2,3,4,7,8-HxCDF)	.23 - 9.1	pg/g
	Hexachlorodibenzofuran (1,2,3,6,7,8-HxCDF)	.21 - 5.5	pg/g
	Hexachlorodibenzofuran (2,3,4,6,7,8-HxCDF)	.55 - 10	pg/g
	Hexachlorodibenzofuran (1,2,3,7,8,9-HxCDF)	.25 - 7.7	pg/g
	Heptachlorodibenzofuran, total (HpCDF)	.19 - 9.6	pg/g
	Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)	.15 - 3.3	pg/g
	Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF)	.19 - 10	pg/g
	Octachlorodibenzofuran (OCDF)	.78 - 9.9	pg/g

Pesticides in filtered water by GC/MS [Schedule 2010] (Phases I and II):

Amid

46342	Alachlor	.002	µg/L
39415	Metolachlor	.004	µg/L
82684	Napropamide	.004	µg/L
82676	Pronamide	.018	µg/L
04024	Propachlor	.007	µg/L
82679	Propanil	.004	µg/L

Carbamate

04028	Butylate	.002	µg/L
82680	Carbaryl	.003	µg/L
82674	Carbofuran	.003	µg/L
82668	EPTC	.002	µg/L
82671	Molinate	.003	µg/L
82669	Pebulate	.004	µg/L
82681	Thiobencarb	.002	µg/L
82678	Triallate	.001	µg/L

Dinitroaniline

82673	Benfluralin	.002	µg/L
82663	Ethalfluralin	.004	µg/L
82683	Pendimethalin	.004	µg/L
82661	Trifluralin	.002	µg/L

Metabolite

82660	2,6-Diethylaniline	.003	µg/L

Miscellaneous

82685	Propargite	.013	µg/L

Organochlorine

82682	DCPA	.002	µg/L
39381	Dieldrin	.001	µg/L
34653	p,p'-DDE	.006	µg/L
34253	alpha-HCH	.002	µg/L
39341	Lindane (gamma-HCH)	.004	µg/L

Organophosphorus

38933	Chlorpyrifos	.004	µg/L
39572	Diazinon	.002	µg/L
82677	Disulfoton	.017	µg/L
82672	Ethoprop	.003	µg/L
04095	Fonofos	.003	µg/L
39532	Malathion	.005	µg/L
82686	Methyl Azinphos	.001	µg/L
82667	Methyl Parathion	.002	µg/L
39542	Parathion	.006	µg/L
82664	Phorate	.002	µg/L
82675	Terbufos	.007	µg/L

Permethrin

82687	cis-Permethrin	.005	µg/L

Phenyl Urea

82666	Linuron	.002	µg/L
82670	Tebuthiuron	.01	µg/L

Triazine

39632	Atrazine	.001	µg/L
04041	Cyanazine	.004	µg/L
04040	Desethyl Atrazine	.002	µg/L
82630	Metribuzin	.004	µg/L
04037	Prometon	.003	µg/L
04035	Simazine	.005	µg/L

Uracil

82665	Terbacil	.007	µg/L

Surrogate

90163	Diazinon	percent
90164	Terbuthylazine	percent
90165	alpha D6 HCH	percent

Pesticides in filtered water by HPLC [Schedule 2051] (Phases I and II):

Benoic Acid

38442	Dicamba	.05	µg/L

Benzonitrile

49311	Bromoxynil	.05	µg/L
49303	Dichlobenil	.05	µg/L

Carbamate

49312	Aldicarb	.05	µg/L

Appendix—U.S. Environmental Protection Agency STOage and RETrieval (STORET) codes and minimum reporting level (MRL) or method detection limit (MDL) (Schedules 8308, 2010, and 8015) for constituents analyzed during Phases I and II of the Willamette River Basin Water Quality Study, Oregon, 1992-94—Continued

STORET Code	Constituent	MRL/ MDL
49313	Aldicarb Sulfone	.05 µg/L
49314	Aldicarb Sulfoxide	.05 µg/L
49310	Carbaryl	.05 µg/L
49309	Carbofuran	.05 µg/L
49308	3-hydroxy-carbofuran	.05 µg/L
38501	Methiocarb	.05 µg/L
49296	Methomyl	.05 µg/L
38866	Oxamyl	.05 µg/L
49236	Propham (IPC)	.05 µg/L
38538	Propoxur	.05 µg/L
	Chlorophenoxy acid	
38711	Bentazon	.05 µg/L
39732	2,4-D	.05 µg/L
38746	2,4-DB	.05 µg/L
49304	Dacthal, mono-acid-	.05 µg/L
49302	Dichlorprop (2,4-DP)	.05 µg/L
38482	MCPA	.05 µg/L
38487	MCPB	.05 µg/L
39762	Silvex (2,4,5-TP)	.05 µg/L
39742	2,4,5-T	.05 µg/L
	Dinitroaniline	
49292	Oryzalin	.05 µg/L
	Dinitrophenol	
49301	Dinoseb (DNBP)	.05 µg/L
	Dinitrophenyl	
49299	2,6-Dinitro-o-cresol (DNOC)	.05 µg/L
	Diphenyl ether	
49315	Acifluorfen	.05 µg/L
	Naphthol	
49295	1-Naphthol	.05 µg/L
	Phenoxy acid	
49307	Chloramben (Aimben)	.05 µg/L
	Phenyl urea	
49300	Diuron	.05 µg/L
49297	Fenuron	.05 µg/L
38811	Fluometuron	.05 µg/L
38478	Linuron	.05 µg/L
49294	Neburon	.05 µg/L
	Phthalimide	
49306	Chlorothalonil	.05 µg/L
	Pyrethroid	
49298	Esfenvalerate	.05 µg/L
	Pyridazinone	
49293	Norflurazon	.05 µg/L
	Pyridine	
49305	Clopyralid	.05 µg/L
49291	Picloram	.05 µg/L
	Pyridyloxyacetic acid	
49235	Triclopyr	.05 µg/L
	Uracil	
04029	Bromacil	.05 µg/L
	Surrogate	
99835	BDMC	percent
	Triazines, herbicides in filtered water [custom Schedule 8015] (Phase II)):	
	Alachlor	.007 µg/L
	Ametryn	.006 µg/L
	Atrazine	.009 µg/L
	Bromacil	.02 µg/L
	Butachlor	.008 µg/L
	Butylate	.005 µg/L
	Carboxin	.006 µg/L
	Cyanazine	.006 µg/L
	Cycloate	.01 µg/L
	Desethylatrazine	.01 µg/L
	Desisopropylatrazine	.004 µg/L
	Diphenamid	.008 µg/L
	Hexazinone	.013 µg/L
	Metolachlor	.01 µg/L
	Metribuzin	.005 µg/L
	Prometon	.007 µg/L
	Prometryn	.007 µg/L
	Propachlor	.008 µg/L
	Propazine	.006 µg/L
	Trifluralin	.002 µg/L
	Simazine	.011 µg/L
	Simetryn	.005 µg/L
	Terbacil	.009 µg/L
	Terbuthylazine (surrogate)	percent
	Vernolate	.009 µg/L

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