

RESULTS OF PESTICIDE SAMPLING IN TENNESSEE

Michael W. Gaydos

U.S. GEOLOGICAL SURVEY

Open-File Report 83-148

Prepared in cooperation with the

**TENNESSEE DEPARTMENT OF PUBLIC HEALTH,
DIVISION OF WATER QUALITY CONTROL**



NASHVILLE, TENNESSEE

1983

CONTENTS

	Page
Introduction.....	1
Sampling and analytical techniques.....	3
Results.....	3

ILLUSTRATIONS

Figure 1. Map showing location of pesticide sampling sites.....	2
---	---

TABLES

Table 1. Pesticide sampling sites.....	5
2. Pesticides, PCB, and PCN determined for 12 sites.....	6
3. Streamflow, pesticide, PCB, and PCN data collected for 12 sites.....	7

RESULTS OF PESTICIDE SAMPLING IN TENNESSEE

Michael W. Gaydos

INTRODUCTION

As part of the cooperative agreement between the U.S. Geological Survey (USGS) and the Tennessee Department of Public Health, Division of Water Quality Control, bottom-material and (or) water pesticide samples were collected at 12 sites in Tennessee (fig. 1 and table 1). These pesticide data were collected at specific sampling frequencies between August 1979 and July 1982. The network was designed and operated to help determine whether problems caused by pesticide use could be identified. The specific herbicides and insecticides (table 2) were selected because of their potential impact on the hydrologic environment. Most of the compounds selected are contained in the U.S. Environmental Protection Agency list of toxic pollutants. Streamflow and suspended-sediment data also were collected at each site.

All data collected as part of this program either have been or will be published in the annual USGS data report, "Water Resources Data for Tennessee." Data have been stored in the USGS national computer file of hydrologic data.

SAMPLING AND ANALYTICAL TECHNIQUES

All samples were collected and analyzed using approved USGS techniques. The analytical techniques used can be found in Goerlitz and Brown (1972). Quality assurance was provided by appropriate field and laboratory personnel.

RESULTS

The following is a summary of the data (table 3) collected during this study:

- Traces of commonly used herbicides were found in water from 10 sites (none at sites 3 or 6). The quantities detected were small compared to the maximum contaminant levels for community water supplies (the only standards adopted to date in Tennessee).

- Small concentrations of DDT were found in water from sites 10 and 11. No other insecticides were found in water from the 12 sites.

- PCB was found in at least one sample of bottom material from six sites (sites 6, 8, 9, 10, 11, and 12), but water from only one site (site 10) contained detectable PCB.

- Detectable amounts of DDT, DDD, or DDE were found in bottom material from five sites (sites 5, 8, 9, 10, and 11).

Despite the occurrence of pesticides and (or) PCB in water or bottom material at all but one of the sites, no source of the compounds can be identified.

REFERENCES

- Goerlitz, D. F., and Brown, Eugene, 1972, Methods for analysis of organic substances in water: Techniques of Water-Resources Investigations of the U.S. Geological Survey, Book 5, Chapter A3, 40 p.
- Tennessee Department of Public Health, 1977, Rules of Tennessee Department of Public Health--Bureau of Environmental Health Services--Division of Water Quality Control: 29 p.
- U.S. Environmental Protection Agency, 1976, National interim primary drinking water regulations: Environmental Protection Agency Report 570/9 - 76-003, 159 p.

Table 1.--Pesticide sampling sites

Site no.	Station no.	Station name	Location						No. of samples	
			Latitude			Longitude			Water	Bottom material
			°	'	"	°	'	"		
1	03428070	West Fork Stones River at Manson Pike at Murfreesboro, Tenn.	35	51	25	86	24	43	6	0
2	03436100	Red River at Port Royal, Tenn.	36	33	17	87	08	31	10	0
3	03588500	Shoal Creek at Iron City, Tenn.	35	01	27	87	34	44	6	0
4	03606500	Big Sandy River at Bruceton, Tenn.	36	02	19	88	13	42	9	0
5	07024300	Beaver Creek at Hunting- don, Tenn.	35	59	56	88	26	01	10	3
6	07024500	South Fork Obion River near Greenfield, Tenn.	36	07	05	88	48	39	10	3
7	07025400	North Fork Obion River near Martin, Tenn.	36	24	20	88	51	20	9	2
8	07026370	North Reelfoot Creek at Hwy. 22 near Clayton, Tenn.	36	27	50	89	15	13	9	3
9	07029100	North Fork Forked Deer at Dyersburg, Tenn.	36	01	49	89	23	13	10	3
10	07030240	Loosahatchie River near Arlington, Tenn.	35	18	37	89	38	23	8	2
11	07031650	Wolf River at German- town, Tenn.	35	06	59	89	48	05	10	3
12	07032200	Nonconnah Creek near Germantown, Tenn.	35	02	59	89	49	08	11	4

Table 2.--Pesticides, PCB, and PCN determined for 12 sites.

Type of sample	Parameter name	Tennessee standards ¹ for community water systems maximum contaminant level, ² in micrograms per liter
Water and bottom material	Aldrin	--
	Chlordane	--
	DDD	--
	DDE	--
	DDT	--
	Dieldrin	--
	Endosulfan	--
	Endrin	0.2
	Heptachlor	--
	Heptachlor epoxide	--
	Lindane	4
	Mirex	--
	Methoxychlor	100
	Toxaphene	5
	Polychlorinated biphenyls (PCB)	--
	Polychlorinated naphthalenes (PCN)	--
Water	2,4-D	100
	2,4,5-T	--
	2,4-DP	--
	Silvex	10

¹ Tennessee Department of Public Health, 1977.

² Applies to water samples only. No limits established for bottom material.

Table 3.--Streamflow, pesticide, PCB, and PCN data collected for 12 sites

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
03428070 - W F STONES R AT MANSON PK, AT MURFREESBORO, TENN (LAT 35 51 25 LONG 086 24 43)										
AUG , 1979										
28...	1145	155	.00	--	.00	--	.00	--	.00	--
OCT										
05...	0900	294	.00	--	.00	--	.00	--	.00	--
JAN , 1980										
29...	1045	190	.00	--	.00	--	.00	--	.00	--
JUN										
19...	0630	9.7	.00	--	.00	--	.00	--	.00	--
SEP										
04...	1130	--	.00	--	.00	--	.00	--	.00	--
NOV										
05...	1030	.82	.00	--	.00	--	.00	--	.00	--
03436100 - RED RIVER AT PORT ROYAL, TENN (LAT 36 33 17 LONG 087 08 31)										
SEP , 1979										
18...	1130	--	.00	--	.00	--	.00	--	.00	--
OCT										
03...	1215	1420	.00	--	.00	--	.00	--	.00	--
MAR , 1980										
04...	1000	--	.00	--	.00	--	.00	--	.00	--
MAY										
19...	1605	2780	.00	--	.00	--	.00	--	.00	--
AUG										
13...	1215	416	.00	--	.00	--	.00	--	.00	--
OCT										
07...	1315	--	.00	--	.00	--	.00	--	.00	--
NOV , 1981										
25...	1300	234	<.10	--	<.10	--	<.01	--	<.10	--
FEB , 1982										
11...	1245	4730	<.10	--	<.10	--	<.01	--	<.10	--
MAY										
04...	1100	1310	<.10	--	<.10	--	<.01	--	<.10	--
AUG										
19...	1030	277	<.10	--	<.10	--	<.01	--	<.10	--
03588500 - SHOAL CREEK AT IRON CITY, TENN. (LAT 35 01 27 LONG 087 34 44)										
AUG , 1979										
29...	1300	478	.00	--	.00	--	.00	--	.00	--
OCT										
01...	1430	392	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
27...	1230	624	.00	--	.00	--	.00	--	.00	--
MAY										
28...	1130	890	.00	--	.00	--	.00	--	.00	--
AUG										
13...	1300	203	.00	--	.00	--	.00	--	.00	--
OCT										
08...	1330	156	.00	--	.00	--	.00	--	.00	--

Table 3.--Streamflow, pesticide, PCB, and PCN data collected for 12 sites--Continued

DATE	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
03428070 - W F STONES R AT MANSON PK, AT MURFREESBORO, TENN (LAT 35 51 25 LONG 086 24 43)										
AUG , 1979										
28...	.00	--	.00	--	.00	--	.00	--	.00	--
OCT										
05...	.00	--	.00	--	.00	--	.00	--	.00	--
JAN , 1980										
29...	.00	--	.00	--	.00	--	.00	--	.00	--
JUN										
19...	.00	--	.00	--	.00	--	.00	--	.00	--
SEP										
04...	.00	--	.00	--	.00	--	.00	--	.00	--
NOV										
05...	.00	--	.00	--	.00	--	.00	--	.00	--
03436100 - RED RIVER AT PORT ROYAL, TENN (LAT 36 33 17 LONG 087 08 31)										
SEP , 1979										
18...	.00	--	.00	--	.00	--	.00	--	.00	--
OCT										
03...	.00	--	.00	--	.00	--	.00	--	.00	--
MAR , 1980										
04...	.00	--	.00	--	.00	--	.00	--	.00	--
MAY										
19...	.00	--	.00	--	.00	--	.00	--	.00	--
AUG										
13...	.00	--	.00	--	.00	--	.00	--	.00	--
OCT										
07...	.00	--	.00	--	.00	--	.00	--	.00	--
NOV , 1981										
25...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
FEB , 1982										
11...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAY										
04...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
AUG										
19...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
03588500 - SHOAL CREEK AT IRON CITY, TENN. (LAT 35 01 27 LONG 087 34 44)										
AUG , 1979										
29...	.00	--	.00	--	.00	--	.00	--	.00	--
OCT										
01...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
27...	.00	--	.00	--	.00	--	.00	--	.00	--
MAY										
28...	.00	--	.00	--	.00	--	.00	--	.00	--
AUG										
13...	.00	--	.00	--	.00	--	.00	--	.00	--
OCT										
08...	.00	--	.00	--	.00	--	.00	--	.00	--

Table 3.--Streamflow, pesticide, PCB, and PCN data collected for 12 sites--Continued

DATE	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL IN BOTTOM MATL. (UG/KG)
03428070 - W F STONES R AT MANSON PK, AT MURFREESBORO, TENN (LAT 35 51 25 LONG 086 24 43)										
AUG , 1979										
28...	.00	--	.00	--	.00	--	.00	--	.00	--
OCT										
05...	.00	--	.00	--	.00	--	.00	--	.00	--
JAN , 1980										
29...	.00	--	.00	--	.00	--	.00	--	.00	--
JUN										
19...	.00	--	.00	--	.00	--	.00	--	.00	--
SEP										
04...	.00	--	.00	--	.00	--	.00	--	.00	--
NOV										
05...	.00	--	.00	--	.00	--	.00	--	.00	--
03436100 - RED RIVER AT PORT ROYAL, TENN (LAT 36 33 17 LONG 087 08 31)										
SEP , 1979										
18...	.00	--	.00	--	.00	--	.00	--	.00	--
OCT										
03...	.00	--	.00	--	.00	--	.00	--	.00	--
MAR , 1980										
04...	.00	--	.00	--	.00	--	.00	--	.00	--
MAY										
19...	.00	--	.00	--	.00	--	.00	--	.00	--
AUG										
13...	.00	--	.00	--	.00	--	.00	--	.00	--
OCT										
07...	.00	--	.00	--	.00	--	.00	--	.00	--
NOV , 1981										
25...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
FEB , 1982										
11...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAY										
04...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
AUG										
19...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
03588500 - SHOAL CREEK AT IRON CITY, TENN. (LAT 35 01 27 LONG 087 34 44)										
AUG , 1979										
29...	.00	--	.00	--	.00	--	.00	--	.00	--
OCT										
01...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
27...	.00	--	.00	--	.00	--	.00	--	.00	--
MAY										
28...	.00	--	.00	--	.00	--	.00	--	.00	--
AUG										
13...	.00	--	.00	--	.00	--	.00	--	.00	--
OCT										
08...	.00	--	.00	--	.00	--	.00	--	.00	--

Table 3.--Streamflow, pesticide, PCB, and PCN data collected for 12 sites--Continued

DATE	MIREX, TOTAL (UG/L)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PER- THANE TOTAL (UG/L)	PER- THANE IN BOT TOM MATERIL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
03428070 - W F STONES R AT MANSON PK, AT MURFREESBORO, TENN (LAT 35 51 25 LONG 086 24 43)										
AUG , 1979										
28...	.00	--	.00	--	0	--	.00	.00	--	.00
OCT										
05...	.00	--	.00	--	0	--	.00	.00	--	.00
JAN , 1980										
29...	.00	--	.00	--	0	--	.00	.00	--	.00
JUN										
19...	.00	--	.00	--	0	--	.34	.00	--	.00
SEP										
04...	.00	--	.00	--	0	--	.11	.01	--	.00
NOV										
05...	.00	--	.00	--	0	--	.12	.07	.01	.00
03436100 - RED RIVER AT PORT ROYAL, TENN (LAT 36 33 17 LONG 087 08 31)										
SEP , 1979										
18...	.00	--	.00	--	0	--	.00	.00	--	.00
OCT										
03...	.00	--	.00	--	0	--	.00	.00	--	.00
MAR , 1980										
04...	.00	--	.00	--	0	--	.00	.00	--	.00
MAY										
19...	.00	--	.00	--	0	--	.05	.00	--	.00
AUG										
13...	.00	--	.00	--	0	--	.00	.00	--	.00
OCT										
07...	.00	--	.00	--	0	--	--	--	--	--
NOV										
25...	<.01	--	<.01	--	<1	--	<.01	<.01	<.01	<.01
FEB , 1982										
11...	<.01	--	<.10	--	<1	--	<.01	<.01	<.01	<.01
MAY										
04...	<.01	--	<.10	--	<1	--	<.01	<.01	<.01	<.01
AUG										
19...	<.01	--	<.10	--	<1	--	--	--	--	--
03588500 - SHOAL CREEK AT IRON CITY, TENN. (LAT 35 01 27 LONG 087 34 44)										
AUG , 1979										
29...	.00	--	.00	--	0	--	.00	.00	--	.00
OCT										
01...	.00	--	.00	--	0	--	.00	.00	--	.00
FEB , 1980										
27...	.00	--	.00	--	0	--	.00	.00	--	.00
MAY										
28...	.00	--	.00	--	0	--	.00	.00	--	.00
AUG										
13...	.00	--	.00	--	0	--	.00	.00	--	.00
OCT										
08...	.00	--	.00	--	0	--	--	--	--	--

Table 3.--Streamflow, pesticide, PCB, and PCN data collected for 12 sites--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
03606500 - BIG SANDY RIVER AT BRUCETON, TENN (LAT 36 02 19 LONG 088 13 42)										
SEP , 1979										
19...	1220	255	.00	--	.00	--	.00	--	.00	--
OCT										
05...	1525	186	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
27...	1135	211	.00	--	.00	--	.00	--	.00	--
MAY										
21...	1230	--	.00	--	.00	--	.00	--	.00	--
AUG										
13...	1545	--	.00	--	.00	--	.00	--	.00	--
OCT										
07...	1050	87	.00	--	.00	--	.00	--	.00	--
FEB , 1981										
24...	1330	143	<.10	--	<.10	--	<.01	--	<.10	--
APR										
07...	1515	163	<.10	--	<.10	--	<.01	--	<.10	--
JUL										
01...	1045	134	<.10	--	<.10	--	<.01	--	<.10	--
07024300 - BEAVER CREEK AT HUNTINGDON, TENN. (LAT 35 59 56 LONG 088 26 01)										
SEP , 1979										
25...	1100	56	.00	0	.00	--	.00	.0	.00	.0
NOV										
15...	1000	53	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
26...	0930	55	.00	--	.00	--	.00	--	.00	--
MAY										
28...	1000	40	.00	--	.00	--	.00	--	.00	--
JUL										
08...	1115	59	.00	0	.00	--	.00	.0	.00	.0
DEC										
17...	0845	40	<.10	--	<.10	--	<.01	--	<.10	--
MAR , 1981										
04...	1005	243	<.10	--	<.10	--	<.01	--	<.10	--
MAY										
28...	1000	40	<.10	--	<.10	--	<.01	--	<.10	--
JUL										
08...	0930	29	<.10	<1	<.10	--	<.01	<.1	<.10	<1.0
NOV										
18...	0930	40	<.10	--	<.10	--	<.01	--	<.10	--
07024500 - SOUTH FORK OBION RIVER NEAR GREENFIELD, TENN (LAT 36 07 05 LONG 088 48 39)										
SEP , 1979										
26...	1030	3440	.00	1	.00	--	.00	.0	.00	.0
NOV										
15...	1315	377	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
27...	0915	412	.00	--	.00	--	.00	--	.00	--
MAY										
28...	1430	254	.00	--	.00	--	.00	--	.00	--
JUL										
08...	1400	271	.00	0	.00	--	.00	.0	.00	.0
DEC										
16...	1600	229	<.10	--	<.10	--	<.01	--	<.10	--
MAR , 1981										
05...	1120	1160	<.10	--	<.10	--	<.01	--	<.10	--
MAY										
29...	1030	204	<.10	--	<.10	--	<.01	--	<.10	--
JUL										
08...	1210	772	<.10	<1	<.10	<1.0	<.01	<.1	<.10	<1.0
NOV										
18...	1530	253	<.10	--	<.10	--	<.01	--	<.10	--

Table 3.--Streamflow, pesticide, PCB, and PCN data collected for 12 sites--Continued

DATE	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
03606500 - BIG SANDY RIVER AT BRUCETON, TENN (LAT 36 02 19 LONG 088 13 42)										
SEP , 1979										
19...	.00	--	.00	--	.00	--	.00	--	.00	--
OCT										
05...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
27...	.00	--	.00	--	.00	--	.00	--	.00	--
MAY										
21...	.00	--	.00	--	.00	--	.00	--	.00	--
AUG										
13...	.00	--	.00	--	.00	--	.00	--	.00	--
OCT										
07...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1981										
24...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
APR										
07...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUL										
01...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
07024300 - BEAVER CREEK AT HUNTINGDON, TENN. (LAT 35 59 56 LONG 088 26 01)										
SEP , 1979										
25...	.00	.1	.00	.0	.00	1.5	.00	.0	.00	--
NOV										
15...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
26...	.00	--	.00	--	.00	--	.00	--	.00	--
MAY										
28...	.00	--	.00	--	.00	--	.00	--	.00	--
JUL										
08...	.00	.0	.00	.0	.00	.0	.00	.0	.00	--
DEC										
17...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAR , 1981										
04...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAY										
28...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUL										
08...	<.01	<1.0	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
NOV										
18...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
07024500 - SOUTH FORK OBION RIVER NEAR GREENFIELD, TENN (LAT 36 07 05 LONG 088 48 59)										
SEP , 1979										
26...	.00	.0	.00	.0	.00	.0	.00	.0	.00	--
NOV										
15...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
27...	.00	--	.00	--	.00	--	.00	--	.00	--
MAY										
28...	.00	--	.00	--	.00	--	.00	--	.00	--
JUL										
08...	.00	.0	.00	.0	.00	.0	.00	.0	.00	--
DEC										
16...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAR , 1981										
05...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAY										
29...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUL										
08...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
NOV										
18...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--

Table 3.--Streamflow, pesticide, PCB, and PCN data collected for 12 sites--Continued

DATE	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)
03606500 - BIG SANDY RIVER AT BRUCETON, TENN (LAT 36 02 19 LONG 088 13 42)										
SEP , 1979										
19...	.00	--	.00	--	.00	--	.00	--	.00	--
OCT										
05...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
27...	.00	--	.00	--	.00	--	.00	--	.00	--
MAY										
21...	.00	--	.00	--	.00	--	.00	--	.00	--
AUG										
13...	.00	--	.00	--	.00	--	.00	--	.00	--
OCT										
07...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1981										
24...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
APR										
07...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUL										
01...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
07024300 - BEAVER CREEK AT HUNTINGDON, TENN. (LAT 35 59 56 LONG 088 26 01)										
SEP , 1979										
25...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
NOV										
15...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
26...	.00	--	.00	--	.00	--	.00	--	.00	--
MAY										
28...	.00	--	.00	--	.00	--	.00	--	.00	--
JUL										
08...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
DEC										
17...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAR , 1981										
04...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAY										
28...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUL										
08...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
NOV										
18...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
07024500 - SOUTH FORK OBION RIVER NEAR GREENFIELD, TENN (LAT 36 07 05 LONG 088 48 39)										
SEP , 1979										
26...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
NOV										
15...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
27...	.00	--	.00	--	.00	--	.00	--	.00	--
MAY										
28...	.00	--	.00	--	.00	--	.00	--	.00	--
JUL										
08...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
DEC										
16...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAR , 1981										
05...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAY										
29...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUL										
08...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
NOV										
18...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--

Table 3. Streamflow, pesticide, PCB, and PCN data collected for 12 sites--Continued

DATE	MIREX, TOTAL (UG/L)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PER- THANE TOTAL (UG/L)	PER- THANE IN BOTTOM MATERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
03606500 - BIG SANDY RIVER AT BRUCETON, TENN (LAT 36 02 19 LONG 088 13 42)										
SEP , 1979										
19...	.00	--	.00	--	0	--	.00	.00	--	.00
OCT										
05...	.00	--	.00	--	0	--	.01	.00	--	.00
FEB , 1980										
27...	.00	--	.00	--	0	--	.00	.00	--	.00
MAY										
21...	.00	--	.00	--	0	--	.00	.00	--	.00
AUG										
13...	.00	--	.00	--	0	--	.00	.00	--	.00
OCT										
07...	.00	--	.00	--	0	--	--	--	--	--
FEB , 1981										
24...	<.01	--	<.01	--	<1	--	<.01	<.01	<.01	<.01
APR										
07...	<.01	--	<.01	--	<1	--	<.01	<.01	<.01	<.01
JUL										
01...	<.01	--	<.01	--	<1	--	<.01	<.01	<.01	<.01
07024300 - BEAVER CREEK AT HUNTINGDON, TENN. (LAT 35 59 56 LONG 088 26 01)										
SEP , 1979										
25...	.00	--	.00	--	0	.0	.00	.00	--	.00
NOV										
15...	.00	--	.00	--	0	--	.00	.00	--	.00
FEB , 1980										
26...	.00	--	.00	--	0	--	.00	.00	--	.00
MAY										
28...	.00	--	.00	--	0	--	.00	.00	--	.00
JUL										
08...	.00	--	.00	--	0	.0	--	--	--	--
DEC										
17...	<.01	--	<.01	--	<1	--	.00	.00	.00	.00
MAR , 1981										
04...	<.01	--	<.01	--	<1	--	<.01	.01	<.01	<.01
MAY										
28...	<.01	--	<.01	--	<1	--	<.01	<.01	<.01	<.01
JUL										
08...	<.01	<.1	<.01	<.10	<1	<1.0	<.01	<.01	<.01	<.01
NOV										
18...	<.01	--	<.01	--	<1	--	<.01	<.01	<.01	<.01
07024500 - SOUTH FORK OBION RIVER NEAR GREENFIELD, TENN (LAT 36 07 05 LONG 088 48 39)										
SEP , 1979										
26...	.00	--	.00	--	0	.0	.00	.00	--	.00
NOV										
15...	.00	--	.00	--	0	--	.00	.00	--	.00
FEB , 1980										
27...	.00	--	.00	--	0	--	.00	.00	--	.00
MAY										
28...	.00	--	.00	--	0	--	.00	.00	--	.00
JUL										
08...	.00	--	.00	--	0	.0	--	--	--	--
DEC										
16...	<.01	--	<.01	--	<1	--	.00	.00	.00	.00
MAR , 1981										
05...	<.01	--	<.01	--	<1	--	.03	.01	<.01	<.01
MAY										
29...	<.01	--	<.01	--	<1	--	<.01	<.01	<.01	<.01
JUL										
08...	<.01	<.1	<.01	<.10	<1	<1.0	.01	.01	<.01	<.01
NOV										
18...	<.01	--	<.01	--	<1	--	<.01	<.01	<.01	<.01

Table 3.--Streamflow, pesticide, PCB, and PCN data collected for 12 sites--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
07025400 - NORTH FORK OBION RIVER NEAR MARTIN, TENN (CE) (LAT 36 24 20 LONG 088 51 20)										
NOV , 1979										
16...	0815	189	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
26...	1430	286	.00	--	.00	--	.00	--	.00	--
MAY										
28...	1730	190	.00	--	.00	--	.00	--	.00	--
JUL										
09...	0900	157	.00	0	.00	--	.00	.0	.00	.0
DEC										
17...	1330	221	<.10	--	<.10	--	<.01	--	<.10	--
MAR , 1981										
04...	1625	3210	<.10	--	<.10	--	<.01	--	<.10	--
MAY										
28...	1300	310	<.10	--	<.10	--	<.01	--	<.10	--
JUL										
08...	1515	199	<.10	<1	<.10	<1.0	<.01	<.1	<.10	<1.0
NOV										
18...	1515	173	<.10	--	<.10	--	<.01	--	<.10	--
07026370 - N REELFOOT CR AT HWY 22, NEAR CLAYTON, TN (LAT 36 27 50 LONG 089 15 13)										
SEP , 1979										
28...	1115	13	.00	2	.00	--	.00	.0	.00	1.0
NOV										
14...	1100	9.9	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
26...	1535	22	.00	--	.00	--	.00	--	.00	--
MAY										
29...	0930	3.9	.00	--	.00	--	.00	--	.00	--
JUL										
09...	1200	4.3	.00	0	.00	--	.00	.0	.00	2.0
DEC										
17...	1130	5.3	<.10	--	<.10	--	<.01	--	<.10	--
MAR , 1981										
04...	1020	235	<.10	--	<.10	--	<.01	--	<.10	--
MAY										
27...	1615	30	<.10	--	<.10	--	<.01	--	<.10	--
JUL										
09...	0925	16	<.10	<1	<.10	<1.0	<.01	<.1	<.10	<1.0
07029100 - N FK FORKED DEER RIVER AT DYERSBURG TENN (CE) (LAT 36 01 49 LONG 089 23 13)										
SEP , 1979										
28...	0830	3140	.00	9	.00	--	.00	.0	.00	3.0
NOV										
16...	1000	446	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
26...	1200	1340	.00	--	.00	--	.00	--	.00	--
MAY										
29...	1400	291	.10	--	.00	--	.00	--	.00	--
JUL										
09...	1530	1410	.00	0	.00	--	.00	.0	.00	.0
DEC										
16...	1100	619	<.10	--	<.10	--	<.01	--	<.10	--
MAR , 1981										
03...	1050	383	<.10	--	<.10	--	<.01	--	<.10	--
MAY										
27...	1100	896	<.10	--	<.10	--	<.01	--	<.10	--
JUL										
10...	1055	439	<.10	10	<.10	<1.0	<.01	<.1	<.10	11
NOV										
18...	1000	221	<.10	--	<.10	--	<.01	--	<.10	--

Table 3.--Streamflow, pesticide, PCB, and PCN data collected for 12 sites--Continued

DATE	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
07025400 - NORTH FORK OBION RIVER NEAR MARTIN, TENN (CE) (LAT 36 24 20 LONG 088 51 20)										
NOV , 1979										
16...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
26...	.00	--	.00	--	.00	--	.00	--	.00	--
MAY										
28...	.00	--	.00	--	.00	--	.00	--	.00	--
JUL										
09...	.00	.0	.00	.0	.00	.0	.00	.0	.00	--
DEC										
17...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAR , 1981										
04...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAY										
28...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUL										
08...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
NOV										
18...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
07026370 - N REELFOOT CR AT HWY 22, NEAR CLAYTON, TN (LAT 36 27 50 LONG 089 15 13)										
SEP , 1979										
28...	.00	.1	.00	.0	.00	.0	.00	.0	.00	--
NOV										
14...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
26...	.00	--	.00	--	.00	--	.00	--	.00	--
MAY										
29...	.00	--	.00	--	.00	--	.00	--	.00	--
JUL										
09...	.00	2.4	.00	2.0	.00	.0	.00	.3	.00	--
DEC										
17...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAR , 1981										
04...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAY										
27...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUL										
09...	<.01	.6	<.01	.1	<.01	<.1	<.01	.2	<.01	<.1
07029100 - N FK FORKED DEER RIVER AT DYERSBURG TENN (CE) (LAT 36 01 49 LONG 089 23 13)										
SEP , 1979										
28...	.00	.2	.00	.3	.00	.1	.00	.0	.00	--
NOV										
16...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
26...	.00	--	.00	--	.00	--	.00	--	.00	--
MAY										
29...	.00	--	.00	--	.00	--	.00	--	.00	--
JUL										
09...	.00	.0	.00	.0	.00	.0	.00	.0	.00	--
DEC										
16...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAR , 1981										
03...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAY										
27...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUL										
10...	<.01	4.4	<.01	<.1	<.01	4.6	<.01	.8	<.01	<.1
NOV										
18...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--

Table 3.--Streamflow, pesticide, PCB, and PCN data collected for 12 sites--Continued

DATE	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)
07025400 - NORTH FORK OBION RIVER NEAR MARTIN, TENN (CE) (LAT 36 24 20 LONG 088 51 20)										
NOV , 1979										
16...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
26...	.00	--	.00	--	.00	--	.00	--	.00	--
MAY										
28...	.00	--	.00	--	.00	--	.00	--	.00	--
JUL										
09...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
DEC										
17...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAR , 1981										
04...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAY										
28...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUL										
08...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
NOV										
18...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
07026370 - N REELFOOT CR AT HWY 22, NEAR CLAYTON, TN (LAT 36 27 50 LONG 089 15 13)										
SEP , 1979										
28...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
NOV										
14...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
26...	.00	--	.00	--	.00	--	.00	--	.00	--
MAY										
29...	.00	--	.00	--	.00	--	.00	--	.00	--
JUL										
09...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
DEC										
17...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAR , 1981										
04...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAY										
27...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUL										
09...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
07029100 - N FK FORKED DEER RIVER AT DYERSBURG TENN (CE) (LAT 36 01 49 LONG 089 23 13)										
SEP , 1979										
28...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
NOV										
16...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
26...	.00	--	.00	--	.00	--	.00	--	.00	--
MAY										
29...	.00	--	.00	--	.00	--	.00	--	.00	--
JUL										
09...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
DEC										
16...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAR , 1981										
03...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAY										
27...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUL										
10...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
NOV										
18...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--

Table 3.--Streamflow, pesticide, PCB, and PCN data collected for 12 sites--Continued

DATE	MIREX, TOTAL (UG/L)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PER- THANE TOTAL (UG/L)	PER- THANE IN BOTTOM MATERIL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
07025400 - NORTH FORK OBION RIVER NEAR MARTIN, TENN (CE) (LAT 36 24 20 LONG 088 51 20)										
NOV , 1979										
16...	.00	--	.00	--	0	--	.00	.00	--	.00
FEB , 1980										
26...	.00	--	.00	--	0	--	.00	.00	--	--
MAY										
28...	.00	--	.00	--	0	--	.00	.01	--	.00
JUL										
09...	.00	--	.00	--	0	.0	--	--	--	--
DEC										
17...	<.01	--	<.01	--	0	--	.00	.00	.00	.00
MAR , 1981										
04...	<.01	--	<.01	--	<1	--	.15	<.01	<.01	<.01
MAY										
28...	<.01	--	<.01	--	<1	--	<.01	<.01	<.01	<.01
JUL										
08...	<.01	<.1	<.01	<.10	<1	<1.0	.26	.01	<.01	<.01
NOV										
18...	<.01	--	<.01	--	<1	--	<.01	<.01	<.01	<.01
07026370 - N REELFOOT CR AT HWY 22,NEAR CLAYTON, TN (LAT 36 27 50 LONG 089 15 13)										
SEP , 1979										
28...	.00	--	.00	--	0	.0	.10	.03	--	.00
NOV										
14...	.00	--	.00	--	0	--	.04	.02	--	.02
FEB , 1980										
26...	.00	--	.00	--	0	--	.00	.00	--	.00
MAY										
29...	.00	--	.00	--	0	--	.05	.00	--	.00
JUL										
09...	.00	--	.00	--	0	.0	--	--	--	--
DEC										
17	.00	--	<.01	--	0	--	.01	.00	.00	.02
MAR , 1981										
04...	<.01	--	<.01	--	0	--	<.01	<.01	<.01	<.01
MAY										
27...	<.01	--	<.01	--	<1	--	.35	.50	<.01	<.01
JUL										
09...	<.01	<.1	<.01	<.10	<1	<1.0	.05	.01	<.01	<.01
07029100 - N FK FORKED DEER RIVER AT DYERSBURG TENN (CE) (LAT 36 01 49 LONG 089 23 13)										
SEP , 1979										
28...	.00	--	.00	--	0	.0	.00	.00	--	.00
NOV										
16...	.00	--	.00	--	0	--	.00	.00	--	.00
FEB , 1980										
26...	.00	--	.00	--	0	--	.00	.00	--	.00
MAY										
29...	.00	--	.00	--	0	--	.00	.00	--	.00
JUL										
09...	.00	--	.00	--	0	.0	--	--	--	--
DEC										
16...	<.01	--	<.01	--	0	--	.00	.00	.00	.00
MAR , 1981										
03...	<.01	--	<.01	--	0	--	.01	<.01	<.01	<.01
MAY										
27...	<.01	--	<.01	--	<1	--	<.01	<.01	<.01	<.01
JUL										
10...	<.01	<.1	<.01	<.10	<1	<1.0	2.4	.02	<.01	<.01
NOV										
18...	<.01	--	<.01	--	<1	--	.01	<.01	<.01	<.01

Table 3.--Streamflow, pesticide, PCB, and PCN data collected for 12 sites--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
07030240 - LOOSAHATCHIE RIVER NEAR ARLINGTON, TENN. (LAT 35 18 37 LONG 089 38 23)										
SEP , 1979										
28...	0830	105	.00	2	.00	--	.00	.0	.00	.0
DEC										
18...	1330	136	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
04...	1130	177	.00	--	.00	--	.00	--	.00	--
JUN										
05...	1115	106	.00	--	.00	--	.00	--	.00	--
DEC										
23...	1000	87	<.10	--	<.10	--	<.01	--	<.10	--
MAR , 1981										
12...	1130	106	<.10	--	<.10	--	<.01	--	<.10	--
JUN										
04...	1015	161	<.10	--	<.10	--	<.01	--	<.10	--
JUL										
14...	1235	86	<.10	<1	<.10	<1.0	<.01	<.1	<.10	<1.0
07031650 - WOLF RIVER AT GERMANTOWN, TN (LAT 35 06 59 LONG 089 48 05)										
SEP , 1979										
27...	1315	1890	.00	2	.00	--	.00	.0	.00	.0
DEC										
18...	1530	2320	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
04...	1015	796	.00	--	.00	--	.00	--	.00	--
JUN										
03...	1100	525	.00	--	.00	--	.00	--	.00	--
JUL										
17...	1000	283	.00	0	.00	--	.00	.0	.00	.0
DEC										
23...	1230	344	<.10	--	<.10	--	<.01	--	<.10	--
MAR , 1981										
11...	1200	653	<.10	--	<.10	--	<.01	--	<.10	--
JUN										
04...	1415	812	<.10	--	<.10	--	<.01	--	<.10	--
JUL										
13...	1030	335	<.10	<1	<.10	<1.0	<.01	<.1	<.10	<1.0
NOV										
03...	1110	328	--	--	--	--	--	--	--	--
07032200 - NONCONNAH CREEK NEAR GERMANTOWN, TENN. (LAT 35 02 59 LONG 089 49 08)										
SEP										
27...	1430	3.4	.00	1	.00	--	.00	.0	.00	.0
DEC										
18...	1200	7.0	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
04...	1430	16	.00	--	.00	--	.00	--	.00	--
JUN										
04...	1100	.70	.00	--	.00	--	.00	--	.00	--
JUL										
16...	1400	.07	.00	0	.00	--	.00	.0	.00	.0
DEC										
23...	1000	.38	<.10	--	<.10	--	<.01	--	<.10	--
MAR , 1981										
10...	1530	4.4	<.10	--	<.10	--	<.01	--	<.10	--
JUN										
04...	1100	8.7	<.10	--	<.10	--	<.01	--	<.10	--
JUL										
13...	1530	.48	<.01	<1	<.10	--	<.01	<.1	<.10	<1.0
NOV										
03...	1440	.12	--	--	--	--	--	--	--	--
JUL , 1982										
14...	0945	.59	--	<1	--	<1.0	--	<.1	--	<1.0

Table 3.- Streamflow, pesticide, PCB, and PCN data collected for 12 sites--Continued

DATE	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
07030240 - LOOSAHATCHIE RIVER NEAR ARLINGTON, TENN. (LAT 35 18 37 LONG 089 38 23)										
SEP , 1979										
28...	.00	2.1	.00	2.7	.00	4.4	.00	.0	.00	--
DEC										
18...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
04...	.00	--	.00	--	.00	--	.00	--	.00	--
JUN										
05...	.00	--	.00	--	.00	--	.00	--	.00	--
DEC										
23...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAR , 1981										
12...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUN										
04...	<.01	--	<.01	--	.03	--	.01	--	<.01	--
JUL										
14...	<.01	.2	<.01	.3	<.01	1.2	<.01	<.1	<.01	<.1
07031650 - WOLF RIVER AT GERMANTOWN, TN (LAT 35 06 59 LONG 089 48 05)										
SEP , 1979										
27...	.00	.0	.00	.0	.00	.0	.00	.0	.00	--
DEC										
18...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
04...	.00	--	.00	--	.00	--	.00	--	.00	--
JUN										
03...	.00	--	.00	--	.00	--	.00	--	.00	--
JUL										
17...	.00	.3	.00	.0	.00	.0	.00	.0	.00	--
DEC										
23...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
FEB , 1981										
04...	--	--	--	--	--	--	--	--	--	--
MAR										
11...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUN										
04...	<.01	--	<.01	--	.01	--	<.01	--	<.01	--
JUL										
13...	<.01	<.1	<.01	<.1	<.01	.2	<.01	<.1	<.01	<.1
NOV										
03...	--	--	--	--	--	--	--	--	--	--
07032200 - NONCONNAH CREEK NEAR GERMANTOWN, TENN. (LAT 35 02 59 LONG 089 49 08)										
SEP , 1979										
27...	.00	.0	.00	.0	.00	.0	.00	.0	.00	--
DEC										
18...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
04...	.00	--	.00	--	.00	--	.00	--	.00	--
JUN										
04...	.00	--	.00	--	.00	--	.00	--	.00	--
JUL										
16...	.00	.0	.00	.0	.00	.0	.00	.0	.00	--
DEC										
23...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAR , 1981										
10...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUN										
04...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUL										
13...	<.01	<.1	<.01	<1.0	<.01	<.1	<.01	<.1	<.01	<.1
NOV										
03...	--	--	--	--	--	--	--	--	--	--
JUL , 1982										
14...	--	<.1	--	<.1	--	<.1	--	<.1	--	<.1

Table 3.--Streamflow, pesticide, PCB, and PCN data collected for 12 sites--Continued

DATE	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
07030240 - LOOSAHATCHIE RIVER NEAR ARLINGTON, TENN. (LAT 35 18 37 LONG 089 38 23)										
SEP , 1979										
28...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
DEC										
18...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
04...	.00	--	.00	--	.00	--	.00	--	.00	--
JUN										
05...	.00	--	.00	--	.00	--	.00	--	.00	--
DEC										
23...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAR , 1981										
12...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUN										
04...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUL										
14...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
07031650 - WOLF RIVER AT GERMANTOWN, TN (LAT 35 06 59 LONG 089 48 05)										
SEP , 1979										
27...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
DEC										
18...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
04...	.00	--	.00	--	.00	--	.00	--	.00	--
JUN										
03...	.00	--	.00	--	.00	--	.00	--	.00	--
JUL										
17...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
DEC										
23...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAR , 1981										
11...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUN										
04...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUL										
13...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
NOV										
03...	--	--	--	--	--	--	--	--	--	--
07032200 - NONCONNAH CREEK NEAR GERMANTOWN, TENN. (LAT 35 02 59 LONG 089 49 08)										
SEP , 1979										
27...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
DEC										
18...	.00	--	.00	--	.00	--	.00	--	.00	--
FEB , 1980										
04...	.00	--	.00	--	.00	--	.00	--	.00	--
JUN										
04...	.00	--	.00	--	.00	--	.00	--	.00	--
JUL										
16...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
DEC										
23...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
MAR										
10...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUN										
04...	<.01	--	<.01	--	<.01	--	<.01	--	<.01	--
JUL										
13...	<.01	<.1	<.01	<.1	<.10	<.1	<.01	<.1	<.01	<.1
NOV										
05...	--	--	--	--	--	--	--	--	--	--
JUL , 1982										
14...	--	<.1	--	<.1	--	<.1	--	<.1	--	<.1

Table 3.--Streamflow, pesticide, PCB, and PCN data collected for 12 sites--Continued

DATE	MIREX, TOTAL (UG/L)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PER- THANE TOTAL (UG/L)	PER- THANE IN BOT- TOM MA- TERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOX- APHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-F TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
07030240 - LOOSAHATCHIE RIVER NEAR ARLINGTON, TENN. (LAT 35 18 37 LONG 089 38 23)										
SEP , 1979										
28...	.00	--	.00	--	0	.0	--	--	--	--
DEC										
18...	.00	--	.00	--	0	--	.00	.00	--	.00
FEB , 1980										
04...	.00	--	.00	--	0	--	.00	.00	--	.00
JUN										
05...	.00	--	.00	--	0	--	.00	.00	--	.00
DEC										
23...	<.01	--	<.01	--	0	--	.00	.00	.00	.00
MAR , 1981										
12...	<.01	--	<.01	--	0	--	.01	<.01	<.01	<.01
JUN										
04...	<.01	--	<.01	--	<1	--	<.01	<.01	<.01	<.01
JUL										
14...	<.01	<.1	<.01	<.10	<1	<1.0	<.01	<.01	<.01	<.01
07031650 - WOLF RIVER AT GERMANTOWN, TN (LAT 35 06 59 LONG 089 48 05)										
SEP , 1979										
27...	.00	--	.00	--	0	.0	.00	.00	--	.00
DEC										
18...	.00	--	.00	--	0	--	.00	.00	--	.00
FEB , 1980										
04...	.00	--	.00	--	0	--	.00	.00	--	.00
JUN										
03...	.00	--	.00	--	0	--	.00	.00	--	.00
JUL										
17...	.00	--	.00	--	0	.0	.00	.00	--	.00
DEC										
23...	<.01	--	<.01	--	0	--	.00	.00	.00	.00
MAR , 1981										
11...	<.01	--	<.01	--	0	--	.03	<.01	<.01	<.01
JUN										
04...	<.01	--	<.01	--	<1	--	.01	<.01	<.01	<.01
JUL										
13...	<.01	<.1	<.01	<.10	<1	<1.0	<.01	<.01	<.01	<.01
NOV										
03...	--	--	--	--	--	--	<.01	<.01	<.01	<.01
07032200 - NONCONNAH CREEK NEAR GERMANTOWN, TENN. (LAT 35 02 59 LONG 089 49 08)										
SEP , 1979										
27...	.00	--	.00	--	0	.0	.00	.00	--	.00
DEC										
18...	.00	--	.00	--	0	--	.00	.00	--	.00
FEB , 1980										
04...	.00	--	.00	--	0	--	.00	.00	--	.00
JUN										
04...	.00	--	.00	--	0	--	.39	.00	--	.00
JUL										
16...	.00	--	.00	--	0	.0	.20	.00	--	.00
DEC										
23...	<.01	--	<.01	--	0	--	.03	.00	.00	.00
MAR , 1981										
10...	<.01	--	<.01	--	0	--	<.01	<.01	<.01	<.01
JUN										
04...	<.01	--	<.01	--	0	--	<.01	<.01	<.01	<.01
JUL										
13...	<.01	<.0	<.01	<.01	0	<1.0	.07	.05	.02	<.01
NOV										
03...	--	--	--	--	--	--	.11	.01	<.01	<.01
JUL										
14...	--	<.1	--	--	--	--	--	--	--	--

STATE OF TENNESSEE

EXPLANATION

▲ 12
▼ 12
○ 12
● 12

Pesticide sampling site and number

Scale: 0 10 20 Miles

Map of Tennessee showing county boundaries and names. Major rivers are depicted. Pesticide sampling sites are marked with numbers 1 through 12 and symbols indicating the type of site (e.g., triangle for water, circle for land). The map includes a scale bar and a legend.

EXPLANATION

12

Pesticide sampling site and number