

US EPA ARCHIVE DOCUMENT

CATALOG DOCUMENTATION
EMAP SURFACE WATERS PROGRAM LEVEL DATABASE
1997-1998 Mid-Atlantic Integrated Assessment Program
STREAM FISH TISSUE CONTAMINANTS (ORGANICS) DATA

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1. DATA SET IDENTIFICATION

1.1 Title of Catalog Document

EMAP Surface Waters Stream Database
1997-1998 Northeast Streams
Stream Fish Tissue Contaminants (Organics) Data Summarized by Stream

1.2 Authors of the Catalog Entry

U.S. EPA NHEERL Western Ecology Division
Corvallis, OR

1.3 Catalog Revision Date

October 2002

1.4 Data Set Name

FTISORG

1.5 Task Group

Surface Waters

1.6 Data Set Identification Code

149

1.7 Version

001

1.8 Requested Acknowledgment

These data were produced as part of the U.S. EPA's Environmental Monitoring and Assessment Program (EMAP). If you publish these data or use them for analyses in publications, EPA requires a standard statement for work it has supported:

"Although the data described in this article have been funded wholly or in part by the U.S. Environmental Protection Agency through its EMAP Surface Waters Program, it has not been subjected to Agency review, and therefore does not necessarily reflect the views of the Agency and no official endorsement of the conclusions should be inferred."

2. INVESTIGATOR INFORMATION

2.1 Principal Investigator

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2.2 Investigation Participant - Sample Collection

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State of Virginia
State of West Virginia
State of Maryland
U.S. Environmental Protection Agency
Office of Research and Development
Region III

3. DATA SET ABSTRACT

3.1 Abstract of the Data Set

The primary function of the stream fish data are to provide a snapshot of the fish assemblage present in the stream at the time of sampling. The fish community represents an integral component of stream biological integrity and represents a snapshot of a publicly visible reflection of stream quality.

3.2 Keywords for the Data Set

Fish assemblage, fish community, fish species identification, fish tissue contamination

4. OBJECTIVES AND INTRODUCTION

4.1 Program Objective

The Environmental Monitoring and Assessment Program (EMAP) was designed to periodically estimate the status and trends of the Nation's ecological resources on a regional basis. EMAP provides a strategy to identify and bound the extent, magnitude and location of environmental degradation and improvement on a regional scale based on a probability-based statistical survey design.

4.2 Data Set Objective

This data set is part of a demonstration project to evaluate approaches to monitoring streams in EMAP. The data set contains the results of multihabitat sample of the fish assemblage taken during spring base flow. A subsample of fish were selected for analysis of organic concentrations in tissue of a whole fish sample submitted for analysis.

4.3 Data Set Background Discussion

The fish community within a stream is an integral component of stream biological integrity and represents a publicly visible reflection of stream quality. Contamination of the fish community is a direct threat to the health of the fish community as well as to the human population consuming these fish. This data set contains the organic contaminant concentrations in whole-fish tissue sample collected at each stream.

4.4 Summary of Data Set Parameters

Fish Tissue Organic Contaminants parameters include wet weight concentrations of target organic contaminants such as Hexachlorobenzene, Endosulfan, and Alpha Chlordane.

5. DATA ACQUISITION AND PROCESSING METHODS

5.1 Data Acquisition

5.1.1 Sampling Objective

To obtain a sample of the fish assemblage within a stream during a two month sampling window from April through mid-June. To obtain enough individuals of a single species suitable for tissue contaminant analysis.

5.1.2 Sample Collection Methods Summary

The assemblage was sampled using a single pass with a backpack electrofishing unit multiple habitats throughout the stream. A subsample of five or more fish from a single species was selected for analysis of organic contaminants in the whole fish.

5.1.3 Sampling Start Date

May 1997

5.1.4 Sampling End Date

September 1998

5.1.5 Platform

NA

5.1.6 Sampling Gear

Backpack electrofishing unit

5.1.7 Manufacturer of Instruments

NA

5.1.8 Key Variables

NA

5.1.9 Sampling Method Calibration

NA

5.1.10 Sample Collection Quality Control

See Lazorchak, et al. 1998.

5.1.11 Sample Collection Method Reference

Chaloud, D.J. and D.V. Peck. 1994. Environmental Monitoring and Assessment Program: Integrated Quality Assurance Project Plan for the Surface Waters Resource Group, 1994 Activities. EPA 600/X-91/080, Rev. 2.00. U.S. Environmental Protection Agency, Las Vegas Nevada.

Lazorchak, J.M., Klemm, D.J., and Peck D.V. (editors). 1998. Environmental Monitoring and Assessment Program- Surface Waters: Field Operations and Methods for Measuring the Ecological Condition of Wadeable Streams. EPA/620/R-94/004F. U.S. Environmental Protection Agency, Washington, D.C.

5.1.12 Sample Collection Method Deviations

5.2 DATA PREPARATION AND SAMPLE PROCESSING

5.2.1 Sample Processing Objective

See Lazorchak, et al. (1998) and Chaloud and Peck (1994).

5.2.2 Sample Processing Methods Summary

See Lazorchak, et al. (1998) and Chaloud and Peck (1994).

5.2.3 Sample Processing Method Calibration

See Lazorchak, et al. (1998) and Chaloud and Peck (1994).

5.2.4 Sample Processing Quality Control

See Lazorchak, et al. (1998) and Chaloud and Peck (1994).

5.2.5 Sample Processing Method Reference

See Lazorchak, et al. (1998) and Chaloud and Peck (1994).

6. DATA MANIPULATIONS

6.1 Name of New or Modified Values

None.

6.2 Data Manipulation Description

See Chaloud and Peck (1994).

7. DATA DESCRIPTION

7.1 Description of Parameters

#	Parameter SAS Name	Data Type	Len	Format	Parameter Label
13	ABUND	Num	8		Number of individuals
5	CMP_THRU	Char	1		Collect from throughout reach (Y/N)
19	COM_FLD	Char	800		Comments
32	C_CHL	Num	8		Wet wt conc. cis-chlordane ug/g
33	C_CHLT	Char	1		Cis-chlordane flag
38	C_NCHL	Num	8		Wet wt conc cis-nonachlor ug/g
39	C_NCHLT	Char	1		Cis-nonachlor flag
3	DATE_COL	Num	8	MMDDYY	Date stream visited
8	DATE_PRO	Num	8	MMDDYY	Lab processing date

22	DIELDRIN	Num	8	Wet wt conc dieldrin ug/g
23	DIELDRNT	Char	1	Dieldrin flag
14	FSHLEN1	Num	8	Length of fish one
15	FSHLEN2	Num	8	Length of fish two
16	FSHLEN3	Num	8	Length of fish three
17	FSHLEN4	Num	8	Length of fish four
18	FSHLEN5	Num	8	Length of fish five
42	HCB	Num	8	Wet wt conc hexachloro-benzene ug/g
43	HCBT	Char	1	Hexachloro-benzene flag
40	HCHLEP	Num	8	Wet wt conc heptachlor-epoxide ug/g
41	HCHLEPT	Char	1	Heptachlor-epoxide flag
81	LAT_DD	Num	8	X-Site Latitude (decimal degrees)
20	LIPID	Num	8	Percent lipid
82	LON_DD	Num	8	X-Site Longitude (decimal degrees)
21	MOISTURE	Num	8	Percent moisture
24	OXYCHL	Num	8	Wet wt conc oxychlordanane ug/g
25	OXYCHLT	Char	1	Oxychlordanane flag
58	PCBC101	Num	8	Wet wt conc pcb congener #101 ug/g
59	PCBC101T	Char	1	Pcb congener #101 flag
60	PCBC105	Num	8	Wet wt conc pcb congener #105 ug/g
61	PCBC105T	Char	1	Pcb congener #105 flag
62	PCBC118	Num	8	Wet wt conc pcb congener #118 ug/g
63	PCBC118T	Char	1	Pcb congener #118 flag
64	PCBC128	Num	8	Wet wt conc pcb congener #128 ug/g
65	PCBC128T	Char	1	Pcb congener #128 flag
66	PCBC153	Num	8	Wet wt conc pcb congener #153 ug/g
67	PCBC153T	Char	1	Pcb congener #153 flag
68	PCBC170	Num	8	Wet wt conc pcb congener #170 ug/g
69	PCBC170T	Char	1	Pcb congener #170 flag
46	PCBC18	Num	8	Wet wt conc pcb congener #18 ug/g
70	PCBC180	Num	8	Wet wt conc pcb congener #180 ug/g
71	PCBC180T	Char	1	Pcb congener #180 flag
72	PCBC187	Num	8	Wet wt conc pcb congener #187 ug/g
73	PCBC187T	Char	1	Pcb congener #187 flag
47	PCBC18T	Char	1	Pcb congener #18 flag
74	PCBC195	Num	8	Wet wt conc pcb congener #195 ug/g
75	PCBC195T	Char	1	Pcb congener #195 flag
76	PCBC206	Num	8	Wet wt conc pcb congener #206 ug/g
77	PCBC206T	Char	1	Pcb congener #206 flag
78	PCBC209	Num	8	Wet wt conc pcb congener #209 ug/g
79	PCBC209T	Char	1	Pcb congener #209 flag
48	PCBC28	Num	8	Wet wt conc pcb congener #28 ug/g
49	PCBC28T	Char	1	Pcb congener #28 flag
50	PCBC44	Num	8	Wet wt conc pcb congener #44 ug/g
51	PCBC44T	Char	1	Pcb congener #44 flag
52	PCBC52	Num	8	Wet wt conc pcb congener #52 ug/g
53	PCBC52T	Char	1	Pcb congener #52 flag
54	PCBC66	Num	8	Wet wt conc pcb congener #66 ug/g
55	PCBC66T	Char	1	Pcb congener #66 flag
56	PCBC77	Num	8	Wet wt conc pcb congener #77 ug/g
57	PCBC77T	Char	1	Pcb congener #77 flag
44	PCBC8	Num	8	Wet wt conc pcb congener #8 ug/g
45	PCBC8T	Char	1	Pcb congener #8 flag
26	PP_DDD	Num	8	Wet wt conc p,p-ddd ug/g

27	PP_DDDT	Char	1	P,p-ddd flag
28	PP_DDE	Num	8	Wet wt conc p,p-dde ug/g
29	PP_DDET	Char	1	P,p-dde flag
30	PP_DDT	Num	8	Wet wt conc p,p-ddt ug/g
31	PP_DDTT	Char	1	P,p-ddt flag
6	SAMPLED	Char	30	Site sampled code
9	SAMP_ID	Num	8	Sample ID (barcode)
10	SAMP_TYP	Char	9	Primary/secondary target species
1	SITE_ID	Char	15	Strm_id
4	TEAM_ID	Num	8	Field crew number
36	TNONCHL	Num	8	Wet wt conc trans-nonachlor ug/g
37	TNONCHLT	Char	1	Trans-nonachlor flag
80	TOTALPCB	Num	8	Total Pcb
34	T_CHL	Num	8	Wet wt conc trans-chlordane ug/g
35	T_CHLT	Char	1	Trans-chlordane flag
11	VERTCODE	Char	8	Specific 8-letter taxa code
12	VERTNAME	Char	25	Common name of sample species
2	VISIT_NO	Num	8	Visit number
7	YEAR	Num	8	Sample Year

7.1.6 Precision to which values are reported

7.1.7 Minimum Value in Data Set

Name	Min
ABUND	2
C_CHL	0.001
C_NCHL	0.001
DATE_COL	05/20/1997
DATE_PRO	03/04/1999
DIELDRIN	0.001
FSHLEN1	1
FSHLEN2	1
FSHLEN3	1
FSHLEN4	1
FSHLEN5	50
HCB	0.0002
HCHLEP	0.001
LAT_DD	35.182938
LIPID	0
LON_DD	-83.555659
MOISTURE	59.96
OXYCHL	0.001
PCBC101	0.001
PCBC105	0.001
PCBC118	0.0007357
PCBC128	0.001
PCBC153	0.0009299
PCBC170	0.001
PCBC18	0.00063
PCBC180	0.001
PCBC187	0.001
PCBC195	0.001

PCBC206	0.001
PCBC209	0.001
PCBC28	0.0003225
PCBC44	0.0009849
PCBC52	0.001
PCBC66	0.001
PCBC77	0.001
PCBC8	0.001
PP_DDD	0.001
PP_DDE	0.001
PP_DDT	0
SAMP_ID	231022
TEAM_ID	1
TNONCHL	0.0003222
TOTALPCB	0
T_CHL	0.001
VISIT_NO	0
YEAR	1997

7.1.7 Maximum Value in Data Set

Name	Max
ABUND	396
C_CHL	0.0275864
C_NCHL	0.0745792
DATE_COL	09/30/1998
DATE_PRO	09/07/2000
DIELDRIN	0.1661
FSHLEN1	362
FSHLEN2	390
FSHLEN3	303
FSHLEN4	310
FSHLEN5	315
HCB	0.01326
HCHLEP	0.0214916
LAT_DD	42.567163
LIPID	11.55
LON_DD	-74.688136
MOISTURE	82.66177373
OXYCHL	0.01177
PCBC101	0.08087
PCBC105	0.308
PCBC118	0.08659
PCBC128	0.02047
PCBC153	0.1665
PCBC170	0.061
PCBC18	0.32033
PCBC180	0.08882
PCBC187	0.05028
PCBC195	0.037
PCBC206	0.2817
PCBC209	0.2304
PCBC28	0.0514295

8.2 Maximum Longitude
-74 Degrees 41 Minutes 17 Seconds West (-74.688136 Decimal Degrees)

8.3 Minimum Latitude
35 Degrees 10 Minutes 58 Seconds North (35.182938 Decimal Degrees)

8.4 Maximum Latitude
42 Degrees 34 Minutes 1 Seconds North (42.567163 Decimal Degrees)

8.5 Name of Area or Region
Mid Atlantic: EPA Region III which includes Delaware, Maryland, New York, Virginia, and West Virginia

9. QUALITY CONTROL / QUALITY ASSURANCE

9.1 Data Quality Objectives
See Chaloud and Peck (1994)

9.2 Quality Assurance Procedures
See Chaloud and Peck (1994)

9.3 Unassessed Errors
NA

10. DATA ACCESS

10.1 Data Access Procedures

10.2 Data Access Restrictions

10.3 Data Access Contact Persons

10.4 Data Set Format

10.5 Information Concerning Anonymous FTP

10.6 Information Concerning WWW

10.7 EMAP CD-ROM Containing the Data

11. REFERENCES

Lazorchak, J.M., Klemm, D.J., and Peck D.V. (editors). 1998. Environmental Monitoring and Assessment Program-Surface Waters: Field Operations and Methods for Measuring the Ecological Condition of Wadeable Streams. EPA/620/R-94/004F. U.S. Environmental Protection Agency, Washington, D.C.

Chaloud, D.J. and D.V. Peck. 1994. Environmental Monitoring and Assessment Program - Surface Waters: Integrated Quality Assurance Project Plan for the Surface Waters Resource Group. U.S. Environmental Protection Agency. Office of Research and Development. Washington, D.C.

12. TABLE OF ACRONYMS

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