

US EPA ARCHIVE DOCUMENT

CATALOG DOCUMENTATION
REGIONAL ENVIRONMENTAL MONITORING AND ASSESSMENT PROGRAM - REGION 1
1993-1994 FISH TISSUE CONTAMINATION IN MAINE LAKES
FISH COLLECTION AND AGE DATA

TABLE OF CONTENTS

1. DATA SET IDENTIFICATION
2. INVESTIGATOR INFORMATION
3. DATA SET ABSTRACT
4. OBJECTIVES AND INTRODUCTION
5. DATA ACQUISITION AND PROCESSING METHODS
6. DATA MANIPULATIONS
7. DATA DESCRIPTION
8. GEOGRAPHIC AND SPATIAL INFORMATION
9. QUALITY CONTROL/QUALITY ASSURANCE
10. DATA ACCESS
11. REFERENCES
12. TABLE OF ACRONYMS
13. PERSONNEL INFORMATION

1. DATA SET IDENTIFICATION

1.1 Title of Catalog document

Regional Environmental Monitoring and Assessment Program - Region 1
1993-94 Fish Tissue Contamination in Maine Lakes
Fish Collection and Age Data Set

1.2 Author of the Catalog entry

Melissa Hughes, OAO Corporation

1.3 Catalog revision date

12 March 1998

1.4 Data set name

REFISH

1.5 Task Group

Region 1

1.6 Data set identification code

00009

1.7 Version

001

1.8 Requested Acknowledgment

If you plan to publish these data in any way, 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 Regional EMAP program, it has not been subjected to Agency review, and therefore does not necessarily reflect the views of the Agency and no official endorsement should be inferred."

2. INVESTIGATOR INFORMATION

2.1 Principal Investigators

Barry Mower
Jeanne DiFranco
Linda Bacon
David Courtemanch
State of Maine Department of Environmental Protection

2.2 Investigation Participant-Sample Collection

Not applicable

3. DATA SET ABSTRACT

3.1 Abstract of the Data Set

The R-EMAP Region 1 Fish Collection and Age data set presents the data and custody information reported for each fish collected in the field. Length, weight and observed anomalies were recorded, as well as method of capture and trophic level. The age of each fish and the method of determination are provided. Custody information on collection and laboratory receipt are also presented.

3.2 Keywords for the Data Set

Lake, Maine, fish, fish length, fish weight, fish age

4. OBJECTIVES AND INTRODUCTION

4.1 Program and Project Objectives

4.1.1 Program Objective

Regional Environmental Assessment and Monitoring Program (R-EMAP) was initiated to test the applicability of the EMAP approach to answer questions about ecological conditions at regional and local scales. Using EMAP's statistical design and indicator concepts, R-EMAP conducts projects at smaller geographic scales and in shorter time frames.

4.1.2 Project Objective

The primary goal of this study was to estimate the levels of contamination in fish populations, and the risk these levels pose to human and wildlife consumers. The primary objective was to determine concentrations of cadmium, lead, mercury, PCBs and selected pesticides in fish collected from Maine lakes.

4.2 Data Set Objective

Present individual fish specimen data to characterize the relationships among fish populations, age structure, trophic level and contaminant distribution.

4.3 Data Set Background Discussion

Because high levels of contaminants have been found in Maine fish since the early 1970's, studies were begun to assess the relationship of these findings to low bald eagle reproduction rates. These studies revealed high mercury and polychlorinated biphenyls (PCBs) levels in nesting eaglets, while studies in other states have also reported high levels of these and other contaminants in fish. These findings led the Maine DEP to initiate this study to measure levels of contamination in fish populations in the State's lakes and ponds, in order to determine the potential risks to both ecological and human health.

4.4 Summary of Data Set Parameters

Fish metrics and age are recorded for each specimen. Field collection and laboratory receipt information is also recorded.

5. DATA ACQUISITION AND PROCESSING METHODS

5.1 Data Acquisition

5.1.1 Sampling Objective

Target fish specimen collection based on trophic level, distribution, desirability as game fish and size.

5.1.2 Sample Collection Methods Summary

Fish were collected by various methods to accumulate ten predators and five omnivores of the same species from each lake. Samples were extracted for age analysis.

5.1.3 Sampling Start Date

June 1993
September 1994

5.1.4 Sampling End Date

September 1993
September 1994

5.1.5 Platform

Not applicable.

5.1.6 Sampling Equipment

fishing rods, gill nets, trap nets, dip nets and beach seines

5.1.7 Manufacturer of Sampling Equipment

Not known

5.1.8 Key Variables

Most data are based on measurement recorded in the field.

7.1 Description of Parameters, continued

#	Parameter SAS Name	Data Type	Len	Format	Parameter Label
16	COMMENTS	Char	20	\$20.	Comments pertaining to aging of fish
17	READER	Char	18	\$18.	Person reading fish age
18	COLLECTO	Char	15	\$15.	Collector of fish
19	COLLDATE	Num	8	MMDDYY8.	Date of Collection
20	DEPRECEI	Char	15	\$15.	Recipient at DEP
21	DEPDATE	Num	8	MMDDYY8.	Date received by DEP staff
22	LABRECEI	Char	15	\$15.	Recipient at HETL or Orono Lab
23	LABDATE	Num	8	MMDDYY8.	Date received by lab staff
24	LAB	Char	6	\$6.	Lab:0=Orono, H=HETL
25	REMARKS1	Char	75	\$75.	Remarks pertaining to sampling effort on lake
26	STK	Char	8	\$8.	Stocked: Y=Yes
27	U	Char	6	\$6.	?=waiting for more stocking info

7.1.6 Precision to which values are reported

Data were reported to the number of decimal places noted in 7.1.

7.1.7 Minimum values in data set

Variable	Minimum
LENGTH	154
GRAMS	30
AGE	1
STKAGE	0.5

7.1.8 Maximum values in data set

Variable	Maximum
LENGTH	630
GRAMS	2250
AGE	22
STKAGE	22.1

7.2 Data Record Example

7.2.1 Column Names for Example Records

LK; LAKE; MIDAS; TOWN; SPEC; ID; LENGTH; GRAMS; METHOD; ANOM; REMARKS2; AGE; AGE_S; STKAGE; PROM; COMMENTS; READER; COLLECTO; COLLDATE; DEPRECEI; DEPDATE; LABRECEI; LABDATE; LAB; REMARKS1; STK; U;

7.2.2 Example Data Records

LK; LAKE; MIDAS; TOWN; SPEC; ID; LENGTH; GRAMS; METHOD; ANOM; REMARKS2; AGE; AGE_S; STKAGE; PROM; COMMENTS; READER; COLLECTO; COLLDATE; DEPRECEI; DEPDATE; LABRECEI; LABDATE; LAB; REMARKS1; STK; U;
 ALLE; ALLEN P; 4516; T35M; PKL; 01; 607; 950; AN; 0; HUMP ON BACK; 7; S; 7.0; P; ; STARR; BURR; 06/24/93; DURAND; 06/29/93; SAVAGE; 07/07/93; H; ; N; ;
 ALLE; ALLEN P; 4516; T35M; PKL; 02; 601; 890; GN; ; ; 8; S; 8.0; P; ; STARR; BURR; 06/25/93; DURAND; 06/29/93; SAVAGE; 07/07/93; H; ; N; ;
 ALLE; ALLEN P; 4516; T35M; PKL; 03; 603; 1090; GN; ; ; 6; S; 6.0; P;

8. GEOGRAPHIC AND SPATIAL INFORMATION

8.1 Minimum Longitude

-71 Degrees 00 Minutes 47 Decimal Seconds

8.2 Maximum Longitude

-67 Degrees 10 Minutes 30 Decimal Seconds

8.3 Minimum Latitude

43 Degrees 15 Minutes 21 Decimal Seconds

8.4 Maximum Latitude

47 Degrees 07 Minutes 11 Decimal Seconds

8.5 Name of area or region

EPA Region 1

The sampling area included the entire state of Maine.

9. QUALITY CONTROL AND QUALITY ASSURANCE

9.1 Data Quality Objectives

Not applicable.

9.2 Data Quality Assurance Procedures

Not applicable.

10. DATA ACCESS

10.1 Data Access Procedures

Data can be downloaded from the WWW site or contact personnel listed in Section 10.3.

10.2 Data Access Restrictions

Not Applicable

10.3 Data Access Contact Persons

Linda C. Bacon
State of Maine Department of Environmental Protection
Bureau of Land and Water Quality
Division of Environmental Assessment
State House Station 17
Augusta, ME 04333
Linda.C.Bacon@state.me.us

Data Librarian EMAP-Information Management
U.S. EPA NHEERL-AED
(401) 782-3184 (Tele)
(401) 782-3030 (FAX)
hughes.melissa@epa.gov

10.4 Data Set Format

Data files are in ASCII semi-colon delimited format.

10.5 Information Concerning Anonymous FTP

Data cannot be accessed via ftp.

10.6 Information Concerning WWW

Data can be downloaded from the WWW site.

10.7 EMAP CD-ROM Containing the Data Set

Data are not available on CD-ROM

11. REFERENCES

DiFranco et. al., 1995. Fish Tissue Contamination in Maine Lakes. Data Report. State of Maine Department of Environmental Protection, Bureau of Land and Water Quality, Division of Environmental Assessment. September 1995.

Maine Department of Environmental Protection et. al., 1993. Project Work/Quality Assurance Plan, Fish Tissue Contamination in the State of Maine. Maine Department of Environmental Protection, Maine Department of Inland Fisheries and Wildlife and U.S. EPA Region 1 Environmental Services Division. December 20, 1993.

12. TABLE OF ACRONYMS

ACRONYM	DESCRIPTION
DEP	Maine Department of Environmental Protection
DIFW	Maine Department of Inland Fisheries and Wildlife
EMAP	Environmental Monitoring and Assessment Program
EPA	Environmental Protection Agency
HetL	Maine Department of Human Services Health and Environmental Testing Laboratory
MIDAS	Maine Information Display Analysis System - unique number assigned to each Maine lake
PCBs	polychlorinated biphenyls
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
REMAP	Regional Environmental Monitoring and Assessment Program
UMO	National Biological Survey and Sawyer Environmental Chemistry Laboratories at the University of Maine at Orono

13. PERSONNEL INFORMATION

Jeanne DiFranco
Linda Bacon
David Courtemanch
Barry Mower
State of Maine Department of Environmental Protection
Bureau of Land and Water Quality
Division of Environmental Assessment
State House Station 17
Augusta, ME 04333
(207) 287-3901
Barry.F.Mower@state.me.us
Jeanne.L.Difranco@state.me.us
Linda.C.Bacon@state.me.us
Dave.L.Courtemanch@state.me.us

Melissa M. Hughes
EMAP-Information Management
OAO Corp. c/o U.S. EPA NHEERL-AED
27 Tarzwell Drive
Narragansett, RI 02882-1197
(401) 782-3184 (Tele)
(401) 782-3030 (FAX)
hughes.melissa@epa.gov

Ray Thompson
U.S. EPA - Region 1
Environmental Services Division
60 Westview Street
Lexington, MA 02173
(781) 860-4300 (Tele)
thompson.ray@epa.gov