83NODC069-01

3 Tapes rec'd 08-14-79

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northeast Fisheries Center
Sandy Hook Laboratory
Highlands, New Jersey 07732

DDF B:3:12

July 23, 1979 FT34:RNR

8300070

Dr. Elaine Collins
Environmental Data Service
NODC Code D 751
2001 Wisconsin Ave., NW
Washington, D. C. 20235

Dear Dr. Collins:

(1) Enclosed are three tapes of data I've discussed with you at various times: 1) data on water column, sediment and benthic macrofauna collected in Long Island Sound in 1972-73; this is the basis of a paper to be published in the NMFS Special Scientific Report Series; 2) Spawning season data for mid-Atlantic Bight finfish species -- this is part of our data submission to BLM; 3) data on ichthyoplankton collected in the Middle Atlantic Bight in 1965-66 and 1972-75 -- also a part of our overall data set for BLM.

Please contact Suellen Craig or myself (FTS 342-8220) if you have any questions.

Sincerely,

Bob Reid

Robert N. Reid, Chief
Coastal Ecosystems Investigations

Encl.

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. .H A S P  . S Y S T E M . . L O G. .

$ 16.02.04 JOB 827 -- EXQ10721 -- BEGINNING EXEC - INIT 2 - CLASS A
$ 16.02.32 JOB 827 END EXECUTION.


HASP-II JOB STATISTICS --    ITEM              COUNT                COST
                         CPU TIME             9.26 SECS.          $0.46
                         MEMORY TIME           834 KB-SEC         $0.05
                         FILE ACCESSES         188 EXCPS          $0.09
                         CARDS READ             39 CARDS          $0.02
                         LINES PRINTED       8,655 LINES          $8.66
                         CARDS PUNCHED           0 CARDS          $0.00

                                   APPROXIMATE JOB COST           $9.28  (BASED ON EDUCATIONAL RATES)


//EXQ10721 JOB (EXQ100,128,,10),'MASTLIST-AL9411-MEN',                    JOB 827
// MSGCLASS=J,RC=NR
*** #00079-- |--EXQ10721-155500-----AO G L OAY C LIO B
***SETUP      T9
***ROUTE PRINT LOCAL
*************************************************************
***   BEFORE SUBMITTING:
***      REP A/-MEN/----
***      REP A/AL9411/------
***      REP A/EXQ1.MODEL/----.MODEL
***      CHECK SERIAL NOS. TO LIST
***   FOR BIG LISTINGS (>2000 LINES):
***      REP 100/2,20/1,20
***      PEP A/LOCAL/LOCAL
*************************************************************
//LST    EXEC   PGM=SELLST,REGION=128K
//STEPLIB DD    DSN=URI.EXQ1.MIS.LIB,DISP=SHR
//SYSPRINT DD SYSOUT=A
//SYSOUT DD    SYSOUT=A
//SYSUDUMP DD    SYSOUT=A
//OLDMAST DD DSN=URI.EXQ1.MODEL.AL9411(0),DISP=SHR
//TRANSIN DD    DUMMY
//SYSIN DD    *
//
IEF236I ALLOC. FOR EXQ10721 LST
IEF237I 144   ALLOCATED TO STEPLIB
IEF237I 641   ALLOCATED TO SYSPRINT
IEF237I 642   ALLOCATED TO SYSOUT
IEF237I 644   ALLOCATED TO SYSUDUMP
IEF237I 147   ALLOCATED TO OLDMAST
IEF237I 602   ALLOCATED TO SYSIN
IEF142I - STEP WAS EXECUTED - COND CODE 0000
IEF285I   URI.EXQ1.MIS.LIB                                KEPT
IEF285I   VOL SER NOS= URICCC.
IEF285I   URI.EXQ1.MODEL.AL9411.G0008V00                  KEPT
IEF285I   VOL SER NOS= URIEEE.
URI0011I STEP EXECUTION:        9.26 SECS.      188 EXCPS       56K CORE       834 KB-SEC MEMORY TIME




        SELLST CONTROL CARDS:

        $OPTION     LIST
        $FILE-ID    URICOMPLAB
        $SERIAL     00030000 99999999
```

SELLST CONTROL CARDS:

```
$OPTION     LIST
$FILE-ID    URICOMPLAB
$SERIAL     00000000 99999999
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SERIAL	CATEG	LINE	DATA
			1111222222222233333333334444444444555555555566666666667777777777
			6789012345678901234567890123456789012345678901234567890123456789
00000000	C01	01	PROJECT
	002	01	VESSEL
	004	01	CRUISE NUMBER
	008	01	INCLUSIVE DATES
	016	01	NUMBER OF STATIONS
	100	01	STATION NUMBER
	103	01	DATE (DD MM YY) (GMT)
	109	01	REMARKS
	112	01	BOTTOM DEPTH
	114	01	CLOUD COVER (TYPE)
	116	01	CLOUD COVER (%)
	120	01	SURFACE TEMP (DEG. C.)
	124	01	AIR TEMP (DEG. C.)
	136	01	LATITUDE
	138	01	LONGITUDE
	146	01	ARRIVAL TIME (HHMM) (GMT)
	148	01	WIND SPEED (KNOTS)
	150	01	WIND DIRECTION
	156	01	WAVE HEIGHT (M)
	300	01	EXPERIMENT
	301	01	HAUL NUMBER
	302	01	TYPE OF TOW
	303	01	START TIME (HHMM)
	305	01	DATE (DDMMYY) (GMT)
	308	01	SHIP'S SPEED (KNOTS)
	309	01	SHIP'S HEADING DEGREES
	312	01	MAX WIRE OUT (M)
	314	01	(WIRE OUT) ...
		02	(WIRE OUT) ...
	315	01	(WIRE ANGLE) ...
		02	(WIRE ANGLE) ...
	316	01	ANGLE AT MAX WIRE OUT
	319	01	REMARKS
	320	01	TIME GOING OUT (MMSS)
	322	01	TIME AT DEPTH (MMSS)
	324	01	TIME COMING IN (MMSS)
	348	01	MAX. TOW DEPTH (M)
	372	01	TDR TRACE
	400	01	GEAR
	402	01	FLOWMETER NUMBER
		02	FLOWMETER START
		03	FLOWMETER END
	406	01	BOTTLES FILLED
	440	01	NET CONTENTS
	510	01	ORDER CODE AND NAME
	513	01	VIAL NUMBER
	514	01	ALIQUOT FACTOR
	525	01	NUMBER NOT MEASURED
			1111222222222223333333333444444444455555555556666666666777777777
			6789012345678901234567890123456789012345678901234567890123456789

SERIAL	CATEG	LINE	DATA
			1111222222222223333333333444444444455555555556666666666777777777
			6789012345678901234567890123456789012345678901234567890123456789
00000000	528	01	NUMBER OF HEADS
	531	01	NUMBER OF TAILS
	534	01	LENGTHS
	536	01	FREQUENCY OF LENGTHS
	540	01	FAMILY CODE AND NAME
	543	01	VIAL NUMBER
	544	01	ALIQUOT FACTOR
	555	01	NUMBER NOT MEASURED
	558	01	NUMBER OF HEADS
	561	01	NUMBER OF TAILS

SERIAL	CATEG	LINE	DATA
			1111222222222233333333334444444444555555555566666666667777777777
			6789012345678901234567890123456789012345678901234567890123456789
00000000	528	01	NUMBER OF HEADS
	531	01	NUMBER OF TAILS
	534	01	LENGTHS
	536	01	FREQUENCY OF LENGTHS
	540	01	FAMILY CODE AND NAME
	543	01	VIAL NUMBER
	544	01	ALIQUOT FACTOR
	555	01	NUMBER NOT MEASURED
	558	01	NUMBER OF HEADS
	561	01	NUMBER OF TAILS
	564	01	LENGTHS
	566	01	FREQUENCY OF LENGTHS
	570	01	GENUS CODE AND NAME
	573	01	VIAL NUMBER
	574	01	ALIQUOT FACTOR
	585	01	NUMBER NOT MEASURED
	588	01	NUMBER OF HEADS
	591	01	NUMBER OF TAILS
	594	01	LENGTHS
	596	01	FREQUENCY OF LENGTHS
	600	01	SPECIES CODE AND NAME
	604	01	VIAL NUMBER
	606	01	LENGTHS
	608	01	FREQUENCY OF LENGTHS
	635	01	ALIQUCT FACTOR
	636	01	NUMBER NOT MEASURED
	637	01	NUMBER OF HEADS
	638	01	NUMBER OF TAILS

SERIAL	CATEG	LINE	CAT-DEFINITION	DATA
				1111222222222233333333334444444444555555555566666666667777777777
				6789012345678901234567890123456789012345678901234567890123456789
00000500	001	01	PROJECT:	SURVEY-1
	002	01	VESSEL:	ALBATROSS IV
	004	01	CRUISE NUMBER:	74-011
	008	01	INCLUSIVE DATES:	23 SEPTEMBER 1974 - 04 OCTOBER 1974
	016	01	NUMBER OF STATIONS:	106
00000510	100	01	STATION NUMBER:	1
	103	01	DATE (DD MM YY) (GMT):	23 09 74
	112	01	BOTTOM DEPTH: (m)	18
	116	01	CLOUD COVER (%):	0
	124	01	AIR TEMP (DEG. C.):	17.8
	136	01	LATITUDE:	41 03 N
	138	01	LONGITUDE:	071 01 W
	146	01	ARRIVAL TIME (HHMM) (GMT):	2001
	148	01	WIND SPEED (KNOTS):	12
	150	01	WIND DIRECTION:	330 T
	156	01	WAVE HEIGHT (M):	1.0
	300	01	EXPERIMENT:	NEUSTON
	301	01	HAUL NUMBER:	1
	302	01	TYPE OF TOW:	SURFACE
	303	01	START TIME (HHMM):	2006
	305	01	DATE (DDMMYY) (GMT):	23 09 74
	308	01	SHIP'S SPEED (KNOTS):	3.5
	309	01	SHIP'S HEADING DEGREES:	270 T
	322	01	TIME AT DEPTH (MMSS):	1500
	400	01	GEAR:	HAEDRICH 1 1.8 .36 .97
	440	01	NET CONTENTS:	ICHTHYOPLANKTON LARVAE
	510	01	ORDER CODE AND NAME:	148000000 GADIFORMES
	540	01	FAMILY CODE AND NAME:	148010000 GADIDAE
	570	01	GENUS CODE AND NAME:	148010100 UROPHYCIS
	574	01	ALIQUOT FACTOR:	1.00000
	585	01	NUMBER NOT MEASURED:	3745
	594	1		80 90 100 110 120 130 140 150 160 170 190 200 210
	596	1		2 2 1 2 4 1 2 1 2 1 1 2 4
00000520	510	01	ORDER CODE AND NAME:	170000000 PERCIFORMES
	540	01	FAMILY CODE AND NAME:	170510000 STROMATEIDAE
	570	01	GENUS CODE AND NAME:	170511100 PEPRILUS (PORONOTUS)
	600	01	SPECIES CODE AND NAME:	170511104 TRIACANTHUS
	606	1		140 170
	608	1		1 1
	635	01	ALIQUOT FACTOR:	1.00000
00000530	510	01	ORDER CODE AND NAME:	189000000 TETRAODONTIFORMES
	540	01	FAMILY CODE AND NAME:	189030000 BALISTIDAE
	570	01	GENUS CODE AND NAME:	189030500 BALISTES
	600	01	SPECIES CODE AND NAME:	189030502 CAPRISCUS (CAROLINENSIS)
	606	1		320
				1111222222222233333333334444444444555555555566666666667777777777
				6789012345678901234567890123456789012345678901234567890123456789

3-nt. aliquot.

Eq. 5th - 4-nt. aliquot.

15.0 min.

SERIAL	CATEG	LINE	CAT-DEFINITION	DATA
				1111222222222233333333334444444444555555555566666666667777777777
				6789012345678901234567890123456789012345678901234567890123456789
00000530	608	1		1
	635	01	ALIQUOT FACTOR:	1.00000
00000560	100	01	STATION NUMBER:	2
	103	01	DATE (DD MM YY) (GMT):	23 09 74
	112	01	BOTTOM DEPTH:	75
	116	01	CLOUD COVER (%):	9
	124	01	AIR TEMP (DEG. C.):	
	136	01	LATITUDE:	33 N
	138	01	LONGITUDE:	071 04 W

SERIAL	CATEG	LINE	CAT-DEFINITION	DATA
				1111222222222233333333334444444444555555555566666666667777777777
				6789012345678901234567890123456789012345678901234567890123456789
00000530	608	1		1
	635	01	ALIQUOT FACTOR:	1.00000
00000560	100	01	STATION NUMBER:	2
	103	01	DATE (DD MM YY) (GMT):	23 09 74
	112	01	BOTTOM DEPTH:	75
	116	01	CLOUD COVER (%):	0
	124	01	AIR TEMP (DEG. C.):	13.9
	136	01	LATITUDE:	40 33 N
	138	01	LONGITUDE:	071 04 W
	146	01	ARRIVAL TIME (HHMM) (GMT):	2340
	148	01	WIND SPEED (KNOTS):	7
	150	01	WIND DIRECTION:	0 T
	156	01	WAVE HEIGHT (M):	1.0
	300	01	EXPERIMENT:	BONGO
	301	01	HAUL NUMBER:	1
	302	01	TYPE OF TOW:	DOUBLE OBLIQUE
	303	01	START TIME (HHMM):	2345
	305	01	DATE (DDMMYY) (GMT):	23 09 74
	308	01	SHIP'S SPEED (KNOTS):	1.8
	309	01	SHIP'S HEADING DEGREES:	105 T
	312	01	MAX WIRE OUT (M):	92
	316	01	ANGLE AT MAX WIRE OUT:	40
	320	01	TIME GOING OUT (MMSS):	0230
	324	01	TIME COMING IN (MMSS):	0952
	348	01	MAX. TOW DEPTH (M):	75
	372	01	TOR TRACE:	ACCEPTABLE
	400	01	GEAR:	BONGO 1 505 .61
	402	02	FLOWMETER START:	69823
		03	FLOWMETER END:	72813
	440	01	NET CONTENTS:	ICHTHYOPLANKTON LARVAE
	510	01	ORDER CODE AND NAME:	100000000 UNKNOWN:FISH/EGGS (FISH/EGGS)
	514	01	ALIQUOT FACTOR:	1.00000
	525	01	NUMBER NOT MEASURED:	4
00000570	510	01	ORDER CODE AND NAME:	121000000 CLUPEIFORMES
	540	01	FAMILY CODE AND NAME:	121140000 GONOSTOMATIDAE (MAUROLICIDAE)
	570	01	GENUS CODE AND NAME:	121140800 MAUROLICUS
	600	01	SPECIES CODE AND NAME:	121140801 MUELLERI
	606	1		54 56 67 57 61
	608	1		1 1 1 1 1
	635	01	ALIQUOT FACTOR:	1.00000
	636	01	NUMBER NOT MEASURED:	0
00000580	510	01	ORDER CODE AND NAME:	148000000 GADIFORMES
	540	01	FAMILY CODE AND NAME:	148010000 GADIDAE
	570	01	GENUS CODE AND NAME:	148010100 UROPHYCIS
	574	01	ALIQUOT FACTOR:	1.00000
	585	01	NUMBER NOT MEASURED:	347
	594	1		82 42 38 34 58 50 37 79 64 65 48 62 39
				1111222222222233333333334444444444555555555566666666667777777777
				6789012345678901234567890123456789012345678901234567890123456789

SERIAL	CATEG	LINE	CAT-DEFINITION	CAT:
				1111122222222223333333334444444455555555666666667777777777
				6789012345678901234567890123456789012345678901234567890
00000760	600	01	SPECIES CODE AND NAME:	1610511005 CENTROPRISTIS
	605	01	LENGTHS:	128 128 92 112
	634	01	FREQUENCY OF LENGTHS:	1 1 1 1
	635	01	ALIQUOT FRACTION:	1.00000
	636	01	NUMBER NOT MEASURED:	0
00000770	400	01	GEAR:	BONGO 2 6TH .61
	402	02	FLOWMETER START:	87604
		03	FLOWMETER END:	91247
00000780	100	01	STATION NUMBER:	83
	103	01	DATE (DD MM YY) (GMT):	16 03 74
	112	01	BOTTOM DEPTH:	50
	116	01	CLOUD COVER (%):	05
	124	01	AIR TEMP (DEG. C.):	24.4
	136	01	LATITUDE:	38 04 N
	138	01	LONGITUDE:	074 08 W
	145	01	ARRIVAL TIME (HHMM) (GMT):	0310
	148	01	WIND SPEED (KNOTS):	15
	150	01	WIND DIRECTION:	225 T
	156	01	WAVE HEIGHT (M):	1.2
	300	01	EXPERIMENT:	BONGO
	301	01	HAUL NUMBER:	1
	302	01	TYPE OF TOW:	DOUBLE OBLIQUE
	304	01	START TIME (HHMM):	0325
	306	01	DATE (DDMMYY) (GMT):	16 03 74
	308	01	SHIP'S SPEED (KNOTS):	3.9
	309	01	SHIP'S HEADING DEGREES:	225 T
	312	01	MAX WIRE OUT (M):	50
	320	01	TIME GOING OUT (HHSS):	0100
	322	01	TIME AT DEPTH (HHSS):	0200
	324	01	TIME COMING IN (HHSS):	0232
	400	01	GEAR:	BONGO 1 505 .61
	402	02	FLOWMETER START:	39566
		03	FLOWMETER END:	41456
	440	01	NET CONTENTS:	ICHTHYOPLANKTON LARVAE
	510	01	ORDER/OTHER CODE AND NAME:	1706611000 PERCIFORMES
	540	01	FAMILY CODE AND NAME:	1706630000 AMMODYTIDAE
	570	01	GENUS CODE AND NAME:	1706630100 AMMODYTES
	600	01	SPECIES CODE AND NAME:	1706630101 AMERICANUS
	606	01	LENGTHS:	140 220 144 135 112 117 116 117
	608	01	FREQUENCY OF LENGTHS:	1 1 1 1 1 1 1 2
	635	01	ALIQUOT FRACTION:	1.00000
	636	01	NUMBER NOT MEASURED:	2
00000900	400	01	GEAR:	BONGO 2 333 .61
	402	02	FLOWMETER START:	00474
		03	FLOWMETER END:	00100
	440	01	NET CONTENTS:	ZOOPLANKTON VOLUME
	452	01	ALIQUOT FACTOR:	1.00000
				1111122222222233333333344444444455555555666666667777777777
				6789012345678901234567890123456789012345678901234567890

	510	01	ORDER/OTHER CODE AND NAME:	17060000 PERCIFORMES
	540	01	FAMILY CODE AND NAME:	17063000 AMMODYTIDAE
	570	01	GENUS CODE AND NAME:	17063100 AMMODYTES
	600	01	SPECIES CODE AND NAME:	17063101 AMERICANUS
	636	01	LENGTHS:	140 [illegible] 144 [illegible] 132 117 [illegible]
	408	01	FREQUENCY OF LENGTHS:	1 1 1 1 1 1 1
	635	01	ALIQUOT FRACTION:	1.0 /00
	636	01	NUMBER NOT MEASURED:	2
00000800	400	01	GEAR:	BONGO 2 333 .61
	402	02	FLOWMETER START:	01474
		03	FLOWMETER END:	02100
	440	01	NET CONTENTS:	2 ZOOPLANKTON VOLUME
	452	01	ALIQUOT FACTOR:	1.00000

DATE: 11/03/78 MASTER LIST PAGE : 12

SERIAL	DATES	LIVE	DAT-DEFINITION	
	454	01	NUMBER OF JARS:	1
	458	01	VOL: ORGS < 0.5 CM (ML):	1.0
00000900	100	01	STATION NUMBER:	09
	104	01	DATE (DD MM YY) (GMT):	1 07 74
	110	01	BOTTOM DEPTH:	64
	116	01	COLOR, OUTER (M):	100
	124	01	AIR TEMP (DEG. C.):	14.4
	130	01	LATITUDE:	37 35 N
	138	01	LONGITUDE:	074 05 W
	144	01	ARRIVAL TIME (HHMM) (GMT):	1440
	148	01	WIND SPEED (KNOTS):	10
	152	01	WIND DIRECT (M):	SE 7
	156	01	WAVE HEIGHT (M):	1.2
	160	01	SWELL DIRECT:	SE 6
	164	01	SWELL HEIGHT:	1
	168	01	TYPE OF TOW:	2 OBLIQUE
	302	01	START TIME (HHMM):	1450
	306	01	DATE (DDMMYY) (GMT):	1 07 74
	308	01	SHIP'S SPEED (KNOTS):	1.5
	312	01	SHIP'S HEADING (DEGREES):	310
	316	01	WAX WIRE OUT (M):	100
	320	01	TIME WIRE OUT (HMSS):	1454
	324	01	TIME AT DEPTH (HMSS):	1504
	328	01	TIME START IN (HMSS):	1514
	332	01	MAX. TOW DEPTH (M):	64
	336	01	TOW TRACE:	1
				ACCEPTABLE
	400	01	GEAR:	BONGO 1 505 .61
	402	02	FLOWMETER START:	01474
		03	FLOWMETER END:	01993
	440	01	NET CONTENTS:	1 ICHTHYOPLANKTON LARVAE
	510	01	ORDER/OTHER CODE AND NAME:	17060000 PERCIFORMES
	540	01	FAMILY CODE AND NAME:	17063000 AMMODYTIDAE
	544	01	ALIQUOT FRACTION:	1.00000
	548	01	NUMBER NOT MEASURED:	2
	564	01	LENGTHS:	85
	568	01	FREQUENCY OF LENGTHS:	1
00000930	400	01	GEAR:	BONGO 2 333 .61
	402	02	FLOWMETER START:	10596
		03	FLOWMETER END:	11113
	440	01	NET CONTENTS:	2 ZOOPLANKTON VOLUME
	452	01	ALIQUOT FACTOR:	1.00000
	454	01	NUMBER OF JARS:	1
	458	01	VOL: ORGS < 2.5 CM (ML):	65 ml
00000970	100	01	STATION NUMBER:	10
	104	01	DATE (DD MM YY) (GMT):	1 07 74
	110	01	BOTTOM DEPTH:	71
	130	01	LATITUDE:	37 23 N

General Tape Information

DSN
NAME: LIS. DATA
VOL/SER NUMBER: 043631
STANDARD LABEL TAPE
FULL BLOCK - 1600 BPI - IN EBCDIC
BLOCKSIZE = 4240 RECORD LENGTH = 80
9 TRACK TAPE

LABEL 1 DRAXLER WATER COL. DATA
LABEL 2 REID BENTHIC DATA

If you have any questions
Call Sue Craig 201-872-0200 EX. 286

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northeast Fisheries Center
Sandy Hook Laboratory
Highlands, New Jersey 07732

November 4, 1977

Dr. Elaine Collins
National Oceanographic Data Center
Department of Commerce
2001 Wisconsin Avenue, N.W.
Washington, D. C. 20235

Dear Dr. Collins:

In response to your letter of 5 October 1977 concerning submission of data from our report on Long Island Sound, I'm enclosing 1) a DDF (cover page only), 2) a sample listing of data, from the report, which are presently on tape, and 3) a separate listing of data which are on cards only. These two listings include all the report's data except for: 1) the 1973 information, 2) all nutrient data, 3) all temperature, salinity and oxygen data from other than surface and bottom samples, and 4) the data in Table 7 which were taken from an earlier study (Sanders, 1956).

Please advise on what I should do next in submitting these data sets to NODC.

Sincerely yours,

Robert N. Reid

Robert N. Reid, Chief
Coastal Ecosystems
Investigation

Encl:

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
LIS	1-3	3		'LIS'	
CRUISE NO.	4	1		'1, 2 or 3'	
STATION	5-7	3		I3	
DEPTH (Feet)	8-10	3		I3	
SURFACE or BOTTOM	11	1		'S or B'	
TEMPERATURE °C	12-16	5		F5.2	
SALINITY °/oo	17-21	5		F5.2	
DISSOLVED OXYGEN mg/l	22-26	5		F5.2	
NO_2 ugat/l	27-31	5		F5.2	
NO_3 ugat/l	32-36	5		F5.2	
NH_4 ugat/l	37-41	5		F5.2	
ORTHO P ugat/l	42-46	5		F5.2	
UREA ugat/l	47-51	5		F5.2	

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		

		ACCESSION NUMBER

DATA DOCUMENTATION FORM

83NODC069

NOAA FORM 24-13 (4-72)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

FORM APPROVED
O.M.B. No. 41-R2651

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

1. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED

NMFS NEFC.
SANDY HOOK MARINE LAB.
HIGHLANDS NJ 07732

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

LONG ISLAND SOUND (LIS)

3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT

'LIS'

4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) *(E.G., SHIP, BUOY, ETC.)*	6. PLATFORM AND OPERATOR NATIONALITY(IES)		7. DATES	
		PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR
Unknown	Ship (boat)	USA	USA		

8. ARE DATA PROPRIETARY?

☒ NO ☐ YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

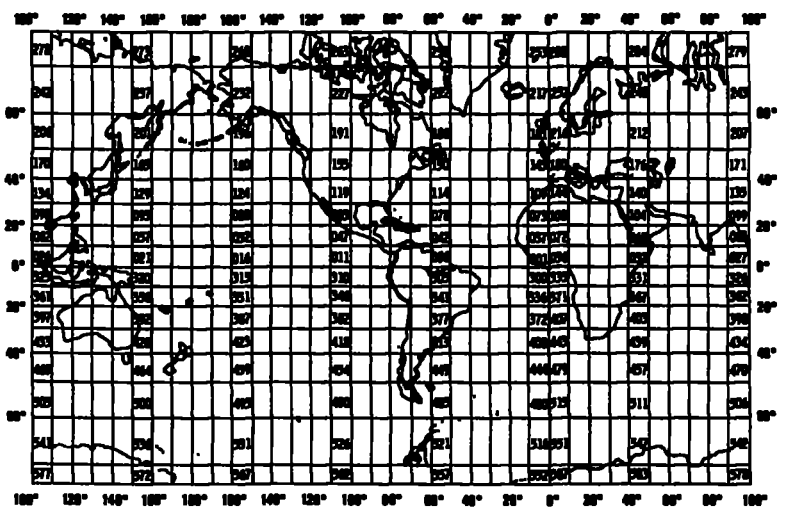
9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

☒ NO ☐ YES ☐ PART *(SPECIFY BELOW)*

10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER *(AND ADDRESS IF OTHER THAN IN ITEM-1)*

11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.

GENERAL AREA



B. SCIENTIFIC CONTENT

Include enough information concerning manner of observation, instrumentation, analysis, and data reduction routines to make them understandable to future users. Furnish the minimum documentation considered relevant to each data type. Documentation will be retained as a permanent part of the data and will be available to future users. Equivalent information already available may be substituted for this section of the form (i.e., publications, reports, and manuscripts describing observational and analytical methods). If you do not provide equivalent information by attachment, please complete the scientific content section in a manner similar to the one shown in the following example.

EXAMPLE (HYPOTHETICAL INFORMATION)

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
Salinity	7oo	Nansen bottles	Inductive salinometer (Hytech model 5510)	N/A (Not applicable)
		STD Bissett-Berman Model 9006	N/A	Values averaged over 5-meter intervals
Water color	Forel scale	Visual comparison with Forel bottles	N/A	N/A
Sediment size	ϕ units and percent by weight	Ewing corer	Standard sieves. Carbonate fraction removed by acid treatment	Same as "Sedimentary Rock Manual," Folk '65

(SPACE IS PROVIDED ON THE FOLLOWING TWO PAGES FOR THIS INFORMATION)

B. SCIENTIFIC CONTENT

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING

B. SCIENTIFIC CONTENT

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C. DATA FORMAT

This information is requested only for data transmitted on punched cards or magnetic tape. Have one of your data processing specialists furnish answers either on the form or by attaching equivalent readily available documentation. Identify the nature and meaning of all entries and explain any codes used.

1. List the record types contained in your file transmittal (e.g., tape label record, master, detail, standard depth, etc.).

2. Describe briefly how your file is organized.

3-13. Self-explanatory.

14. Enter the field name as appropriate (e.g., header information, temperature, depth, salinity.

15. Enter starting position of the field.

16. Enter field length in number columns and unit of measurement (e.g., bit, byte, character, word) in unit column.

17. Enter attributes as expressed in the programming language specified in item 3 (e.g., "F 4.1," "BINARY FIXED (5.1)").

18. Describe field. If sort field, enter "SORT 1" for first, "SORT 2" for second, etc. If field is repeated, state number of times it is repeated.

C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

1. LIST RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE
GIVE METHOD OF IDENTIFYING EACH RECORD TYPE

7 CARD DATA SET. FORMAT ON FOLLOWING PAGE.
LABEL 2 OF TAPE CONTAINS REID'S BENTHIC DATA.

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

DSN NAME - LIS. DATA
VOLUME NUMBER - 043631
STANDARD LABEL TAPE
FULL BLOCK - 1600 BPI
BLOCKSIZE - 4240
RECORD LENGTH - 80 COLS.
9 TRACK TAPE

3. ATTRIBUTES AS EXPRESSED IN ☐ PL-1 ☐ ALGOL ☐ COBOL ☐ FORTRAN ☐ _____ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:
NAME AND PHONE NUMBER SUE CRAIG 201-872-0200 FTS 342-8286
ADDRESS SANDY HOOK MARINE LAB. HIGHLANDS, NJ 07732

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE
☐ BCD ☐ BINARY
☐ ASCII ☒ EBCDIC
☐ _____

6. NUMBER OF TRACKS (CHANNELS)
☐ SEVEN
☒ NINE
☐ _____

7. PARITY
☐ ODD
☐ EVEN

8. DENSITY
☐ 200 BPI ☒ 1600 BPI
☐ 556 BPI
☐ 800 BPI
☐ _____

9. LENGTH OF INTER-RECORD GAP (IF KNOWN) ☐ 3/4 INCH ☐ _____

10. END OF FILE MARK
☐ OCTAL 17
☐ _____

11. PASTE-ON-PAPER LABEL DESCRIPTION *(INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)*

#

12. PHYSICAL BLOCK LENGTH IN BYTES
4240

13. LENGTH OF BYTES IN BITS
8

C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

1. LIST RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE
GIVE METHOD OF IDENTIFYING EACH RECORD TYPE

ONE RECORD TYPE, IN FORMAT ON FOLLOWING PAGE
LABEL 1 OF TAPE

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

3. ATTRIBUTES AS EXPRESSED IN ☐ PL-1 ☐ ALGOL ☐ COBOL
☒ FORTRAN ☐ _____ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:
NAME AND PHONE NUMBER _____
ADDRESS _____

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE
☐ BCD ☐ BINARY
☐ ASCII ☒ EBCDIC
☐ _____

6. NUMBER OF TRACKS (CHANNELS)
☐ SEVEN
☒ NINE
☐ _____

7. PARITY
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☐ 556 BPI
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☐ _____

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☐ _____

10. END OF FILE MARK
☐ OCTAL 17
☐ _____

11. PASTE-ON-PAPER LABEL DESCRIPTION *(INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)*

12. PHYSICAL BLOCK LENGTH IN BYTES

13. LENGTH OF BYTES IN BITS

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18. Describe field. If sort field, enter "SORT 1" for first, "SORT 2" for second, etc. If field is repeated, state number of times it is repeated.

DDF B:3:12 | ACCESSION NUMBER 8300070

BL2821 C100

DATA DOCUMENTATION FORM

NOAA FORM 24-13
(4-72)

83NODC284

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

FORM APPROVED
O.M.B. No. 41-R2651

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

1. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED

Department of Commerce / National Oceanic & Atmospheric Administration
National Ocean Service Office of Oceanography & Marine Services
N/OMS32 Rockville Bldg. rm. 666
11400 Rockville Pike Rockville Maryland 20852

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Northeast Monitoring Program

3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT

NEMP (83-01)

4. PLATFORM NAME(S)

5. PLATFORM TYPE(S) *(E.G., SHIP, BUOY, ETC.)*

NOAA Ship Pierce

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR

7. DATES

Feb. 8-9, 1983

FROM: MO/DAY/YR	TO: MO/DAY/YR

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?

(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[ ] NO [X] YES [ ] PART *(SPECIFY BELOW)*

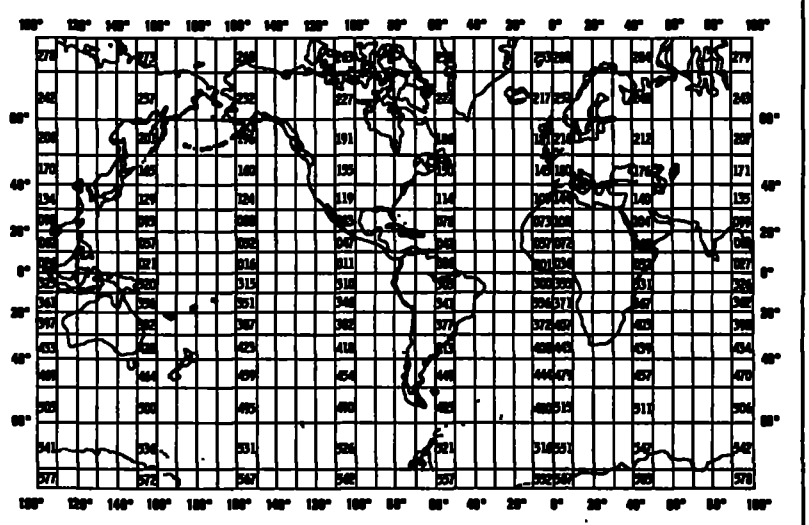
10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER *(AND ADDRESS IF OTHER THAN IN ITEM-1)*

Cathy Warsh

301 443-8610

11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.

GENERAL AREA



USCOMM-DC 44289-P72

B. SCIENTIFIC CONTENT

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EXAMPLE (HYPOTHETICAL INFORMATION)

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
Salinity	‰	Nansen bottles	Inductive salinometer (Hytech model S510)	N/A (Not applicable)
		STD Bissett-Berman Model 9006	N/A	Values averaged over 5-meter intervals
Water color	Forel scale	Visual comparison with Forel bottles	N/A	N/A
Sediment size	ϕ units and percent by weight	Ewing corer	Standard sieves. Carbonate fraction removed by acid treatment	Same as "Sedimentary Rock Manual," Folk '65

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2. Describe briefly how your file is organized.

3-13. Self-explanatory.

14. Enter the field name as appropriate (e.g., header information, temperature, depth, salinity.

15. Enter starting position of the field.

16. Enter field length in number columns and unit of measurement (e.g., bit, byte, character, word) in unit column.

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18. Describe field. If sort field, enter "SORT 1" for first, "SORT 2" for second, etc. If field is repeated, state number of times it is repeated.

C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

1. LIST RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE GIVE METHOD OF IDENTIFYING EACH RECORD TYPE

Water Physics and Chemistry
NODC file type 004

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

3. ATTRIBUTES AS EXPRESSED IN ☐ PL-1 ☐ ALGOL ☐ COBOL ☒ FORTRAN ☐ _____ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:
NAME AND PHONE NUMBER Michael Sagalow
ADDRESS Rockwall Bldg. rm 643 N/OMS33 Rockville MD. 20852

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE ☐ BCD ☐ BINARY ☒ ASCII ☐ EBCDIC ☐ _____

6. NUMBER OF TRACKS (CHANNELS) ☐ SEVEN ☒ NINE ☐ _____

7. PARITY ☒ ODD ☐ EVEN

8. DENSITY ☐ 200 BPI ☒ 1600 BPI ☐ 556 BPI ☐ 800 BPI ☐ _____

9. LENGTH OF INTER-RECORD GAP (IF KNOWN) ☐ 3/4 INCH ☐ 1/2 inch

10. END OF FILE MARK ☐ OCTAL 17 ☐ _____

11. PASTE-ON-PAPER LABEL DESCRIPTION *(INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)*

PURS83
8 files
8 Stations

12. PHYSICAL BLOCK LENGTH IN BYTES 84

13. LENGTH OF BYTES IN BITS 8

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		

USCOMM-DC 44289-P72

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		

USCOMM-DC 44289-P72

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		

USCOMM-DC 44289-P72

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("✓") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRUMENT IS NOT CALIBRATED
		YOUR ORGANIZATION (√)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (√)	BEFORE OR AFTER USE (√)	BEFORE AND AFTER USE (√)	ONLY AFTER REPAIR (√)	ONLY WHEN NEW (√)	(√)
InterOcean									
InterOcean Model 513	Feb. 1,1983	X				X			

USCOMM-DC 44289-P72

ERROR CORRECTION DOCUMENTATION FORM

DATE:

TO: OC12

FROM: OC13

SUBJECT: Error Correction in Processing of Data Set - Accession # 8300070

1) File Type: (Unknown)

2) Project Ident.: ———

3) Track Nos.: (not given)

I. Error Corrections as reported to Principal Investigator:

Error	Correction Completed (Check)

II. Additional error corrections:

Error	Correction Completed (Check)

III. Processor Name: _____

DATA SET ROUTE SHEET

ACCESSION/TRACK # 8300070 / not given

Step	Completion Date/Init.		Tape # or DSN	# of Files	BLKSIZE	LRECL	# RECORDS
ORIGINATOR TAPE	6/21/83	[redacted]	43631	—	4240	80	
QUADI/SCAN TAPE	6/21/83	[redacted]	W05400	—	4240	80	
ASSIGNED FOR PROCESS.							
DDF EVALUATION							
QUALITY REVIEW							
PRELIMINARY DATA-SORT							
PRELIMINARY MULCHEK							
FIRST USER TAPE							
WORK DISK FILE							
FINAL USER TAPE							
FINAL MULCHEK							
EDITED DISK FILE							
DATA SET "FINALIZED"							

TAPE ASSIGNMENT SHEET

ACCESSION NO.: 8300070 TRACK NO(s).: (not given)

Type of Tape	Tape Number	Label	LRECL	BLKSIZE	RECFM	Remarks
Originator	43631	NL	80	4240	9-tr 1600BPI EBCDIC	
Duplicate	W05700	SL	80	4240	9-tr 1600BPI ASCII	
Reformatted						
First User						
Final User						

ENVIRONMENTAL BASELINES IN LONG ISLAND SOUND

1972 - 1975

Submitted by

R. N. Reid, A. B. Frame and A. F. Draxler

Middle Atlantic Coastal Fisheries Center
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
Highlands, New Jersey 07732

TABLE OF CONTENTS

ABSTRACT

A baseline survey of environmental quality in Long Island Sound (LIS) has been underway since 1972. Four cruises have been conducted to date to sample a maximum of 142 stations throughout LIS. Parameters examined were water column temperature, salinity, dissolved oxygen, nitrate, nitrite, ammonia, urea, iron, orthophosphorus and microorganisms; sediment types, organic matter, calcium carbonate, heavy metals and microorganisms; and benthic meiofauna and macrofauna.

By a number of indices (dissolved oxygen, nutrients, sediment organics, heavy metals and fecal coliform bacteria), westernmost LIS was shown to bear a considerable contaminant load. Next in degree of waste burdens were waters associated with several Connecticut urban areas. All of western and central LIS exhibited somewhat degraded water quality compared to that of the well-flushed eastern basin.

Densities, diversities, and assemblages of benthic macrofauna are described. Characteristics of the macrofauna were found to be more closely correlated to sediment type than to the above water quality indices. Contaminant loads appeared to have some effect on macrofauna, but this effect was as a rule restricted to shifts in species composition. Density, species richness and diversity in the most polluted areas were generally comparable to those in less perturbed regions.

Spatial and temporal extent of a "population crash" observed in the benthic fauna following the high standing stocks of Summer 1972 are examined. The fauna decline apparently covered most of central and

western LIS. Several taxa were involved, but effects were most pronounced on the suspension - feeding bivalves

The report's foremost conclusion is that environmental degradation in parts of LIS, especially the western end, was comparable to that found in other highly stressed local areas (Raritan Bay and the New York Bight sewage sludge and dredge spoil disposal areas); but that this deterioration had not affected the benthic fauna to as great an extent as in these other systems.

INTRODUCTION

The Middle Atlantic Coastal Fisheries Center (MACFC) of the National Marine Fisheries Service (NMFS) began a baseline survey of the water column and benthos throughout Long Island Sound (LIS) in the summer of 1972. This study was undertaken for several reasons. 1) Despite the heavy and often conflicting demands placed on LIS, there exists little synoptic information on water quality for the entire Sound, and no such information for benthic parameters: such baseline information is essential to document future changes in water quality in LIS; 2) Our data might also be compared to such historical information as does exist, to offer some insight to changes that have already taken place; 3) A large body of baseline knowledge would serve as a managerial guide in judging which areas might best accept further impact of man's activities, what locations cannot tolerate any further stresses, and which areas appear already overstressed and in need of remedial action; 4) Baseline data would also be instructive as to the nature of acceptable new activities and perhaps engineering designs and precautions to minimize impacts of these activities.

The survey's primary focus is on a detailed description of the benthic environment of LIS. Due to their relative immobility, benthic macrofauna (defined here as invertebrates retained on a 1.0 mm mesh sieve) are considered among the most sensitive indicators of environmental conditions (Boesch, 1972; Gage, 1972;

and circulation patterns, The University of Connecticut has initiated studies on circulation and the transport of suspended material in eastern LIS, with the overall goal of determining budgets of heavy metal wastes for the eastern Sound (Dehlinger et al., 1973).

Water column measurements in the present survey were designed to complement ~~those of~~ the above studies. Given the need to concurrently sample the benthos, our water sampling was often less synoptic than in these other investigations. Also, our sampling frequency was generally lower than theirs. However, the previous studies ~~have~~ were focused mainly on one to two transects along the east-west axis of LIS, and thus are less able to pinpoint areas of deteriorating water quality. Besides providing an overall picture of water quality throughout LIS, our water column data will also be examined for possible correlations with benthic faunal patterns.

II. MATERIALS AND METHODS

The sampling pattern for this survey consisted of 142 stations, the majority spaced 2-3 miles apart along consecutive 5-minute longitude lines throughout LIS (Figure 1). This basic pattern was augmented by adding stations inside the 20' (6.1 m) isobath along each shoreline. Specific stations were also occupied within the New Haven, ~~Connecticut~~ River and New London

dredge spoil disposal grounds (stations 69, 123, 136); at locations also studied by NYOSL in conjunction with power plant operations at Shoreham, L. I. (stations 67 and 71); and at the eight stations sampled by Sanders (1956) in central LIS (corresponding to our 46, 50, 51, 55, 57, 70, 72 and 81). On Cruise 1 stations were located through combined use of radar and fathometer, augmented by horizontal sextant, land and buoy ranges when possible. Loran A coordinates were taken at each station, and were used on subsequent cruises to aid in station relocation. Latitudes, longitudes and depths are provided for all stations in Table 1. Loran coordinates for these stations are available on request.

The first sampling, which included all 142 stations as well as 16 in adjacent Gardiners Bay, L. I. ("G" stations- Fig. 1) took place in July and August 1972 (Cruise 1). Sixty-nine of the LIS stations were resampled in April 1973 (Cruise 2), when three stations were also established within the Connecticut River ("C" stations). In September 1973 (Cruise 3), we resampled 103 of the original LIS stations. Fifty-seven of these stations were again sampled in September 1975. (Cruise 4 - presentation of results from this Cruise is limited to selected macrofaunal collections.)

On Cruise 1, temperature and salinity were measured at 5-meter depth intervals using a Beckman RS-5 induction salinometer.[1/] On Cruise 2 and 3, we used reversing thermometers and a Beckman RS-7B

[1/] Mention of product names is for identification purposes only and does not imply endorsement by the National Marine Fisheries Service.

Macrofaunal analysis will concentrate on the major groups, Polychaeta, Mollusca and Arthropoda. These three taxa comprised the great majority of the species and individuals collected. Other groups encountered included Protozoa (Foraminifera and shelled ciliates), Porifera, Cnidaria, Rhynchocoela, Nematoda, Archiannelida, Oligochaeta, Entoprocta, Sipunculida, Phoronida, Ectoprocta, Echinodermata, Chaetognatha and Tunicata. These taxa will not be considered at the present time due to their infrequency of occurrence, uncertainty of identification and/or difficulty in quantification. An exception is the anthozoan Ceriantheopsis americanus, which often represented sizable biomass and has been correlated in other studies with distributions of organics.

We have also not considered planktonic forms (chaetognaths, copepods, mysids, larval decapods, etc.), which are for the most part accidentally introduced into the benthic samples.

Species diversities were calculated using an approximation of the Shannon and Weaver (1963) index: $H' \cong -\sum \frac{n_i}{N} \ln \frac{n_i}{N}$, where N is the total number of individuals in the sample, and n_i is the number in the ith species. This index was chosen because it has been commonly used in published benthic studies (Boesch, 1972), thus facilitating comparisons with the present study.

A. Temperature, Salinity

Temperature and salinity (Table 2) followed expected patterns, as described by Riley et al. (1952, 1955, 1956), Hardy (1970, 1972a, 1972b), and Hardy and Weyl (1970). Temperatures were quite uniform both vertically and horizontally in April 1973, with all values between 4 and 9°C. In late September 1973 temperatures ranged from 14 to 22°, and generally increased from east to west, with the exception of colder water near the Connecticut River. Again, no pronounced vertical stratification was observed. The vertical uniformity of temperatures (and ~~increasing~~ bottom DOs, as mentioned below), indicate that mixing of the water column was already well underway by late September.

Hardy (1972b) notes that a thermocline ~~does~~ develops in midsummer, especially in the central basin; thermal layering is also seen in our measurements for July and August 1972 (Figures 2-3). These Cruise 1 data will not be used in examining horizontal patterns, since the sampling period covered six weeks, and effects of Hurricane Agnes may have obscured the typical distributions. Reflecting the storm's freshwater input, salinity (Figures 4-5) was below 22°/oo for most surface waters in central LIS, and down to 17.8 °/oo a mile ~~seaward~~ of the Saugatuck River mouth.

Salinities on Cruises 2 and 3 increased gradually moving west to east (from 23°/oo to 29.6 in April and 25.0 to 30.6 in September). There were only small increases in salinity with depth during this sampling period.

B. Nutrients

Distributions of all nutrients measured in summer 1972 exhibit a pattern which is by now well documented: very large inputs from the East River dominate nutrient distributions and water quality throughout western LIS. Surface ammonia, for instance, approaches 30 microgram-atoms/liter (µgat/l) at Throgs Neck (Figure 6). These high levels agree with those reported for August of the previous year by Hardy (1972b), who also found ammonia continuing to increase in the East River. A tenfold decrease in surface ammonia is evident as one moves east of Hempstead Harbor. Open surface waters of the central basin (as defined by Hardy, 1972b) had moderate ammonia levels (generally 0.5 - 1.0 µgat/l). The Long Island coast east of Stony Brook showed similar concentrations. The eastern end of the Sound was characterized by ammonia values of less than 0.5 µgat/l, again in agreement with Hardy (1972b). There appear to be significant ammonia additions in the areas off New Haven-West Haven, Oyster Bay-Northport and the Nissequogue River, and perhaps off New London and Bridgeport. Ammonia is also presumably being added in the densely-populated western end, but this cannot be distinguished from the East River input.

LIST OF TABLES AND FIGURES

Table 1 SAMPLING LOCATIONS AND DEPTHS

STATION	LATITUDE °N	LONGITUDE °W	DEPTH METERS	STATION	LATITUDE °N	LONGITUDE °W	DEPTH METERS
1	40°49.1'N	73°47.6'W	6.1	46	41°04.9'N	73°05.2'W	22.9
2	40°48.1'N	73°47.1'W	30.5	47	41°02.8'N	73°05.0'W	30.5
3	40°48.0'N	73°46.3'W	4.6	48	41°00.2'N	73°05.0'W	36.6
4	40°52.8'N	73°46.1'W	9.2	49	40°59.1'N	73°05.0'W	2.4
5	40°52.8'N	73°45.0'W	18.3	50	41°11.0'N	73°03.2'W	7.6
6	40°52.3'N	73°43.4'W	4.6	51	41°11.3'N	73°01.8'W	9.2
7	40°56.3'N	73°41.4'W	6.1	52	41°13.1'N	73°00.0'W	7.6
8	40°55.2'N	73°41.0'W	15.3	53	41°11.3'N	73°00.0'W	10.4
9	40°53.4'N	73°41.0'W	10.7	54	41°09.0'N	73°00.0'W	15.2
10	40°51.8'N	73°41.0'W	7.6	55	41°06.2'N	73°00.2'W	22.9
11	40°59.8'N	73°35.0'W	5.5	56	41°04.6'N	73°00.0'W	29.0
12	40°58.7'N	73°35.0'W	18.0	57	41°01.4'N	72°58.6'W	30.5
13	40°56.4'N	73°35.0'W	17.7	58	41°00.1'N	73°00.0'W	21.9
14	40°55.0'N	73°35.0'W	4.6	59	40°58.6'N	73°00.0'W	6.1
15	41°00.9'N	73°31.6'W	6.1	60	41°14.4'N	72°56.6'W	4.6
16	40°59.8'N	73°31.7'W	30.5	61	41°12.6'N	72°55.0'W	9.2
17	40°57.3'N	73°31.7'W	19.8	62	41°10.6'N	72°55.0'W	15.3
18	40°55.8'N	73°31.7'W	5.8	63	41°06.3'N	72°55.0'W	25.0
19	41°02.6'N	73°28.1'W	6.1	64	41°04.3'N	72°55.0'W	28.1
20	41°00.8'N	73°28.1'W	21.4	65	41°02.2'N	72°55.0'W	36.6
21	40°58.4'N	73°28.3'W	21.4	66	41°00.3'N	72°55.0'W	24.4
22	40°56.9'N	73°28.3'W	6.1	67	40°58.4'N	72°55.0'W	6.1
23	41°03.3'N	73°24.0'W	6.1	68	41°13.9'N	72°52.9'W	5.5
24	41°02.5'N	73°24.0'W	15.3	69	41°09.0'N	72°52.8'W	18.9
25	40°59.3'N	73°23.9'W	13.7	70	41°08.0'N	72°53.9'W	21.3
26	40°58.1'N	73°23.9'W	6.1	71	40°58.3'N	72°52.6'W	6.1
27	41°06.5'N	73°19.5'W	7.6	72	41°13.6'N	72°50.6'W	8.5
28	41°04.2'N	73°19.5'W	10.7	73	41°12.8'N	72°50.0'W	12.2
29	41°01.0'N	73°19.5'W	30.5	74	41°10.6'N	72°50.0'W	16.8
30	40°58.3'N	73°19.5'W	16.8	75	41°08.6'N	72°50.0'W	24.4
31	40°56.3'N	73°19.6'W	3.0	76	41°06.4'N	72°50.0'W	29.0
32	41°06.9'N	73°15.0'W	5.5	77	41°04.2'N	72°50.0'W	31.1
33	41°05.1'N	73°15.0'W	17.7	78	41°02.2'N	72°50.0'W	38.1
34	41°02.5'N	73°15.0'W	23.5	79	41°00.4'N	72°50.0'W	31.4
35	40°59.8'N	73°15.0'W	25.9	80	40°59.5'N	72°50.0'W	6.1
36	40°57.3'N	73°15.0'W	16.8	81	41°13.6'N	72°46.4'W	12.2
37	40°55.3'N	73°15.0'W	2.4	82	41°14.6'N	72°45.0'W	6.1
38	41°08.7'N	73°10.0'W	6.1	83	41°13.4'N	72°45.0'W	11.9
39	41°06.2'N	73°10.0'W	12.2	84	41°11.5'N	72°45.0'W	18.3
40	41°03.8'N	73°10.0'W	21.4	85	41°09.1'N	72°45.0'W	27.5
41	41°01.5'N	73°10.0'W	29.9	86	41°06.9'N	72°45.0'W	28.0
42	40°59.2'N	73°10.0'W	25.9	87	41°04.2'N	72°45.0'W	29.0
43	40°55.8'N	73°10.0'W	2.4	88	41°02.0'N	72°45.0'W	33.6
44	41°10.4'N	73°05.0'W	6.1	89	41°00.2'N	72°45.0'W	25.9
45	41°07.8'N	73°05.0'W	12.2	90	40°58.4'N	72°45.0'W	5.5

HI. LIS

LIS WATER COLUMN DATA

TABLE 2

STATION	TEMPERATURE °C CRUISE 1			SALINITY °/oo CRUISE 1			D.O mg/l CRUISE 1			NO_2 ugat/l CRUISE 1		NO_3 ugat/l CRUISE 1		NH_4 ugat/l CRUISE 1		Ortho P ugat/l CRUISE 1		UREA ugat/l CRUISE 1
1 surface	19.3		19.2	25.5		25.7	4.6		5.8	2.14		1.65		15.13		5.19		
bottom	18.5		19.3	24.9		25.8	3.1		5.7	1.14		1.13		16.05		4478		
s	19.3	8.3	18.3	24.2	22.4	25.3	2.9	11.2	4.9	3.45	0.61	2.06	6.35	28.36	7.89	6.79	2.70	2.81
25 ft	18.4	8.2	19.3	24.9	22.7	25.4		11.4	4.7		0.53		5.41		6.20		2.21	2.34
50 ft	18.3	5.9	19.6	25.1	23.7	25.3		11.7	4.9		0.24		2.35		2.61		1.70	3.24
75 ft	18.0	5.9	19.7	25.2	23.6	25.3		11.7	4.8		0.29		2.50		2.95		1.93	1.39
100 ft	18.0			25.0							0.11		1.09		2.08		1.73	1.77
b	17.7	5.4	19.8	25.2	23.8	25.5	2.6	11.7	5.1	1.71		1.55		16.10		2.67		
s	19.2		19.0	24.2		25.1	2.7		4.5	3.53		2.13		26.68		6.90		
b	19.0		19.7	24.2		25.3	2.5		4.7	3.55		2.22		24.36		6.14		
s	20.1	8.0	19.1	25.0	23.5	26.2	4.5	11.5	6.7	2.04	0.19	1.96	1.62	11.90	1.38	5.29	1.37	0.97
b	19.1	8.1	19.1	25.0	23.6	26.1	5.0	11.7	6.5	1.77	0.18	1.25	2.83	10.51	0.67	4.15	1.33	0.88
s	19.5	7.4	18.7	24.8	23.3	25.0	6.1	12.1	7.9	2.94	0.27	0.96	2.10	13.40	1.44	5.78	1.49	1.20
25	18.8	6.3	19.1	25.1	23.7	26.1		11.9	7.4		0.15		1.23		1.34		1.41	1.20
50	17.5	5.3	19.4	25.3	24.2	26.3		11.8	6.7		0.09		0.53		0.81		1.20	0.87
b	17.5	5.6	19.5	25.3	24.2	26.3	3.4	11.8	6.7	1.61	0.04	1.06	0.38	12.69	0.77	4.47	1.04	0.77
s	20.5	6.7	19.5	24.9	23.6	26.2	6.8	12.1	9.2	2.41	0.14	1.53	0.97	8.59	1.16	5.48	1.23	1.00
b	18.1	5.9	19.4	25.2	23.6	26.2	3.8	12.1	5.9	1.95	0.16	1.18	1.18	15.34	1.31	4.94	1.31	1.24
s	19.6	7.4	22.9	24.8	22.3	26.6	9.0	12.5	9.3	0.42	0.0	0.0	0.81	0.81	0.70	3.02	0.0	0.80
b	17.9	10.6	22.3	25.3	24.2	26.6	2.8	12.1	10.6	1.40	0.0	0.0	0.0	12.29	0.79	4.18	0.0	0.80
s	20.5	8.7	20.8	25.0	24.2	26.7	11.7	12.3	9.5	0.39	0.06	0.39	0.53	1.24	0.85	2.80	0.78	1.12
25	19.3	5.9	19.9	25.2	23.9	26.7		12.7	7.5		0.0		0.38		0.69		0.47	0.88
b	17.1	5.6	19.2	25.3	24.5	26.8	1.8	12.2	7.1	1.54	0.01	1.11	0.14	14.91	0.70	4.46	0.75	0.80

Table 3 ORGANIC MATTER IN LONG ISLAND SOUND

SEDIMENTS WEIGHT PERCENT

Station	CRUISE 1	2	3	Station	CRUISE 1	2	3	Station	CRUISE 1	2	3
1	9.54		4.67	26	0.13	0.03	0.79	51	0.16	0.19	0.80
2	0.26	6.83	5.15	27	0.08		0.92	52	0.54		
3	0.54		3.30	28	0.53		0.57	53	0.32		
4	0.35		0.34	29	1.05	2.38		54	0.06		
5	9.05	1.23	1.10	30	1.12		3.90	55	2.15	0.60	3.38
6	0.08	0.33	0.61	31	0.03		0.62	56	3.04		
7	9.69	0.41	4.31	32	0.10	0.01	2.15	57	1.99	0.12	0.51
8	1.14	0.01	1.35	33	8.18			58	0.66		
9	0.35	1.58	0.00	34	1.26	0.06	0.53	59	0.02		
10	5.44	0.11	0.94	35	4.96	1.00	0.35	60	1.22	1.99	5.96
11	0.74	0.13	0.26	36	1.18	0.56	1.08	61	0.22	2.18	0.86
12	0.41	1.66	6.66	37	0.03	0.02	0.56	62	0.02	0.50	1.18
13	0.10	0.05	6.17	38	0.16			63	0.27	0.30	1.45
14	0.23	0.52		39	0.09			64	1.13		
15	0.00		0.47	40	0.42			65	0.97	1.42	6.98
16	1.39	0.39	0.55	41	0.01			66	1.07		
17	0.79	1.61	0.93	42	7.36			67	0.11	0.03	0.39
18	0.23	0.07	0.51	43	0.16			68	0.69	0.01	0.52
19	0.53	0.64	0.30	44	0.17	1.38	2.48	69	0.44	1.03	1.62
20	2.26		6.79	45	0.10		6.23	70	0.46	0.70	4.64
21	0.42			46	0.37	0.01	2.22	71	0.12	0.23	
22	0.18		4.11	47	0.39	0.18	1.68	72	0.95	0.45	3.20
23	0.18	0.04	1.15	48	2.13			73	0.51		0.57
24	0.35		2.46	49	0.09	0.05	0.76	74	0.53		
25	0.26	0.31	2.46	50	0.10	0.14	1.21	75	5.86		

Table 4 CALCIUM CARBONATE in LONG ISLAND SOUND SEDIMENTS WEIGHT PERCENT

Station	CRUISE 1	2	3	Station	CRUISE 1	2	3	Station	CRUISE 1	2	3
1	9.72		10.53	26	2.98	0.32	4.11	51	1.22	1.22	3.49
2	5.02	0.00	15.50	27	9.67		2.16	52	4.25		
3	31.84		14.45	28	3.54		4.06	53	0.35		
4	0.26		18.60	29	13.92	0.04		54	0.90		
5	12.12	0.60	5.23	30	8.86		6.38	55	14.84	0.78	12.27
6	3.16	0.22	1.37	31	0.13		2.53	56	0.74		
7	0.18	0.00	15.61	32	0.66	3.20	8.08	57	24.36	1.13	6.37
8	13.95	0.07	22.93	33	12.88			58	6.84		
9	0.17	1.53	23.41	34	1.91	0.00	15.07	59	0.43		
10	8.77	0.65	1.25	35	5.65	0.00	16.22	60	22.39	2.41	20.45
11	8.27	0.44	13.08	36	9.93	0.29	15.40	61	11.98	0.00	7.07
12	11.39	2.06	10.37	37	0.04	0.00	0.57	62	0.30	0.00	4.86
13	12.81	0.24	13.87	38	3.39			63	0.92	0.00	5.53
14	3.07	0.00		39	25.22			64	3.86		
15	1.81		7.17	40	7.22			65	3.36	0.00	15.06
16	0.13	0.34	4.41	41	0.55			66	7.50		
17	3.99	2.24	19.20	42	0.25			67	0.03	0.76	1.13
18	0.004	0.70	1.13	43	0.08			68	0.04	0.12	1.43
19	8.90	3.98	15.86	44	10.63	4.46	11.81	69	2.37	0.01	9.64
20	4.89		18.78	45	5.60		12.25	70	3.79	0.10	13.53
21	11.88			46	0.35	0.00	6.96	71	0.002	1.09	
22	2.45		17.04	47	3.60	4.43	1.78	72	9.80	3.61	20.02
23	3.62	0.20	4.33	48	3.43			73	1.55		0.38
24	5.36		6.00	49	0.003	0.36	1.45	74	6.96		
25	1.18	0.47	8.06	50	4.13	0.08	5.67	75	7.92		

Table 5 BENTHIC MACROFAUNA IN LONG ISLAND SOUND

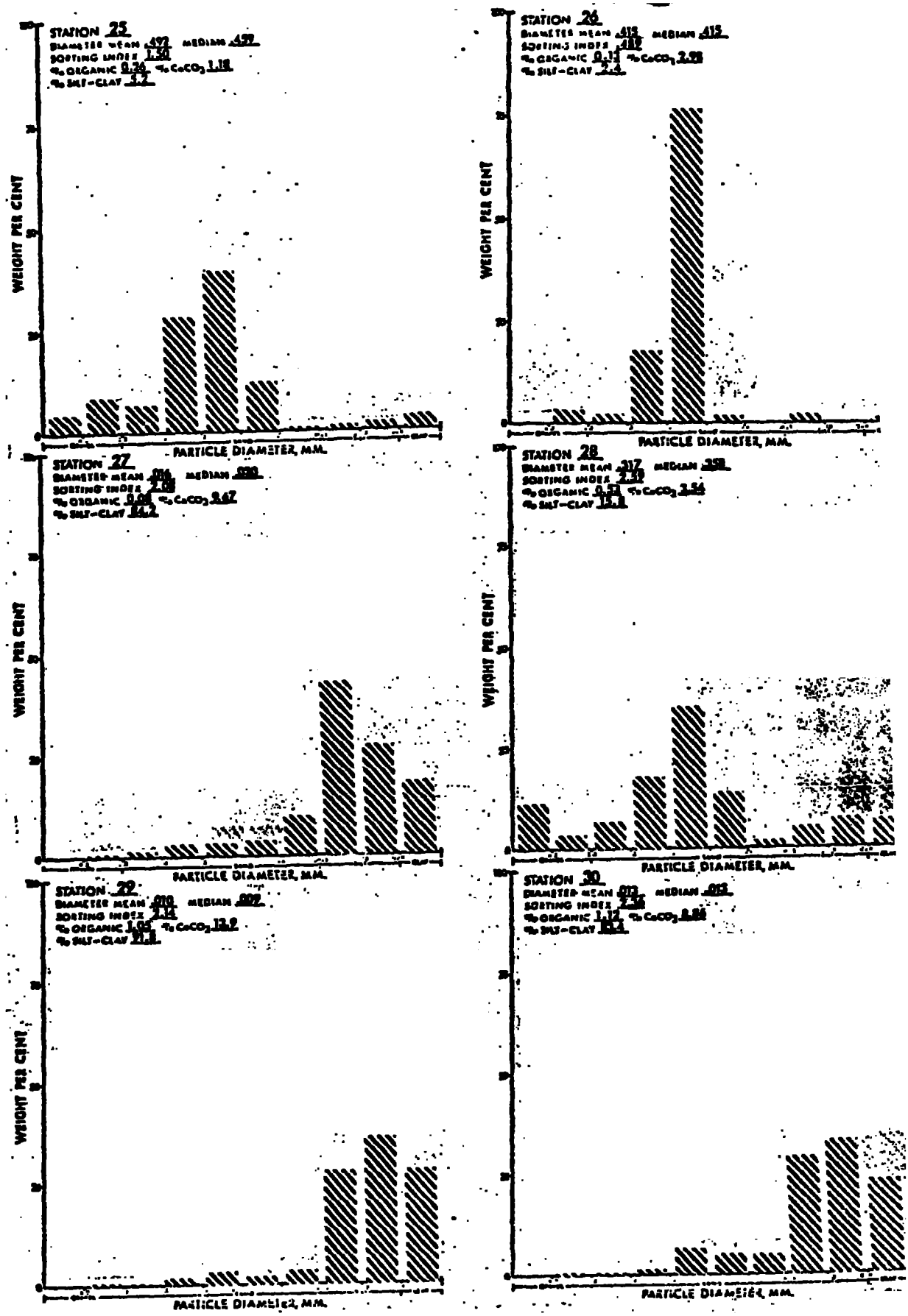
Organisms per 1/10 m^2, Cruise 1

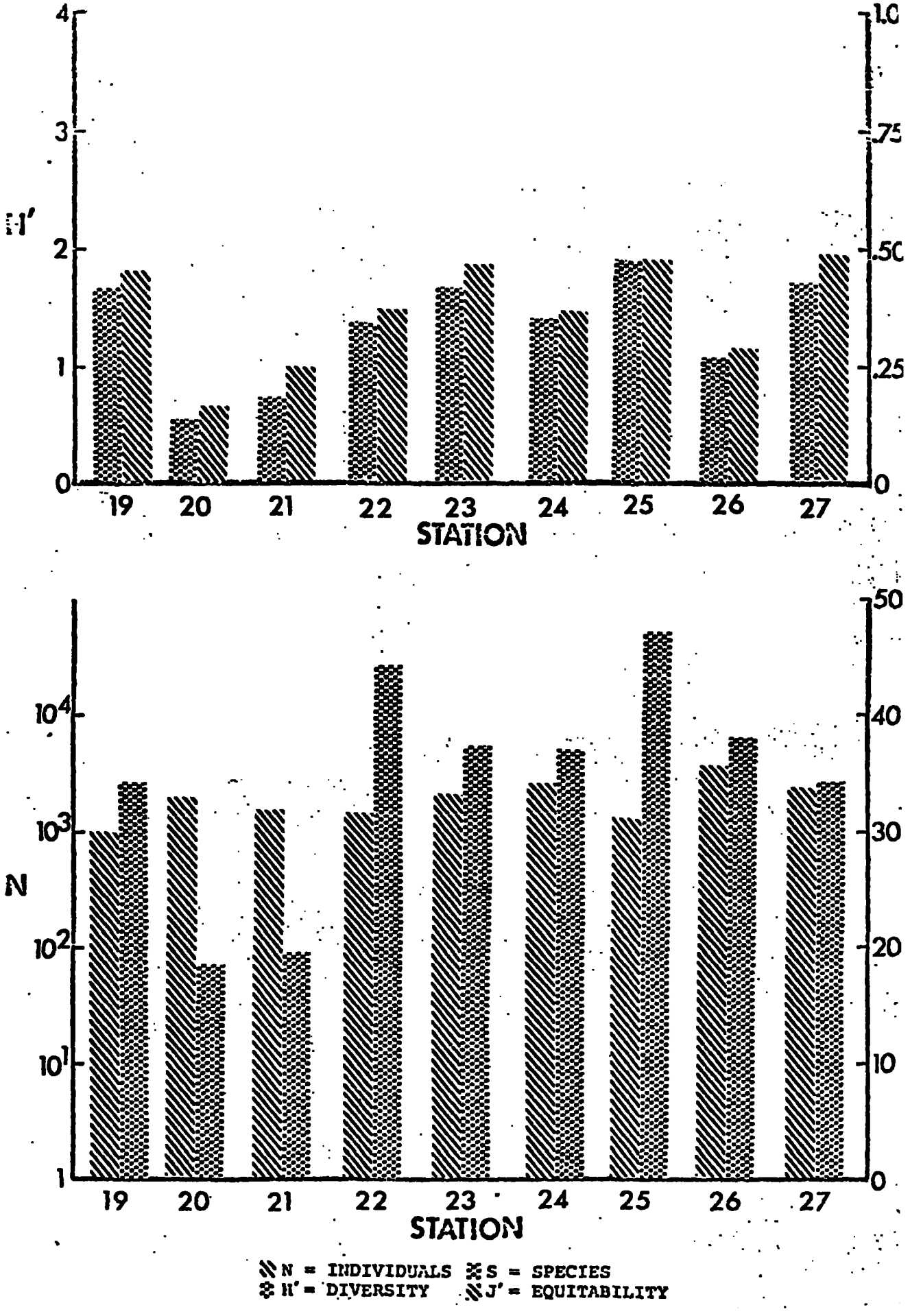
SPECIES	STATION 1	2	3	4	5	6	7	8	9	10	11	12	13
CNIDARIA													
ANTHOZOA													
Cerlantheopsis americana													
POLYCHAETA													
POLYNOIDAE													
Harmothoe extenuata													
Harmothoe imbricata		2											
Lepidonotus squamatus											1		
Lepidonotus sublevis													
SIGALIONIDAE													
Sthenelais boa							1				1		
Sthenelais limicola													
Sigalion arenicola													
Pholoe minuta													
PHYLLODOCIDAE													
Eteone heteropoda				1			1						
Eumida sanguinea				1			2				4		
Paranaitis speciosa		2		1			1						
Phyllodoce arenae				1		2	1						
Phyllodoce mucosa													
Phyllodoce maculata													
NEREIDAE													
Nereis obscura				1									
PILARGIDAE													
Cabira incerta													
Sigambra tentaculata													
SYLLIDAE													
Autolytus cornutus													
Autolytus alexandri													
Autolytus emertoni													
Odontosyllis fulgurans													
Brania clavata													

Table 6 Long Island Sound Benthic Fauna Data

Summer 1972

Station	Individuals	Species	Diversity	Equitability
1	231	16	1.58	0.57
2	778	39	2.11	0.58
3	462	16	1.69	0.61
4	1239	34	2.06	0.58
5	250	14	1.41	0.54
6	672	27	1.85	0.56
7	1416	46	2.40	0.63
8	966	17	0.69	0.24
9	331	14	1.35	0.51
10	61	11	1.84	0.77
11	570	30	1.34	0.39
12	845	9	0.69	0.32
13	1620	13	0.46	0.18
14	645	34	2.30	0.65
15	7655	46	0.89	0.23
16	1244	18	0.46	0.16
17	722	17	0.96	0.34
18	702	22	1.73	0.56
19	914	34	1.65	0.47
20	1900	18	0.56	0.19
21	1572	19	0.70	0.24
22	1584	44	1.35	0.36
23	1985	37	1.62	0.45
24	2536	37	1.31	0.36
25	1150	47	1.80	0.47


STATION 25
STATION 26
STATION 27
STATION 28
STATION 29
STATION 30
WEIGHT PER CENT
PARTICLE DIAMETER, MM.


H'
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20
10
0
19
20
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22
23
24
25
26
27
STATION
N = INDIVIDUALS
S = SPECIES
H' = DIVERSITY
J' = EQUITABILITY

```
Password:
 accNo   fleA refNo  ship staCnt recCnt startDate  endDate
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(1 row affected)
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		ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13
(4-77)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

FORM APPROVED
O.M.B. No. 41-R2651
EXPIRES 1-81

(While you are not required to use this form, it is the most desirable mechanism for providing the required ancillary information enabling the NODC and users to obtain the greatest benefit from your data.)

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

1. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED

NOAA / NAT'L MARINE FISHERIES SERVICE
SANDY HOOK LABORATORY
HIGHLANDS N.J. 07732

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

LONG ISLAND SOUND BENTHIC SURVEY

3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT

LIS I, II, III

4. PLATFORM NAME(S)

CRUISE I: HELICAT (PRIVATE)
II: RORQUAL
III: RORQUAL

5. PLATFORM TYPE(S) (E.G. SHIP, BUOY, ETC.)

SHARK WHALE, XIPHIAS (PRIVATE)

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
US	US

7. DATES

	FROM: MO/DAY/YR	TO: MO/DAY/YR
CRUISE I:	7/17/72	8/25/72
II:	4/3/73	4/17/73
III:	9/[illegible]/73	10/8/73

8. ARE DATA PROPRIETARY?

☒ NO ☐ YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

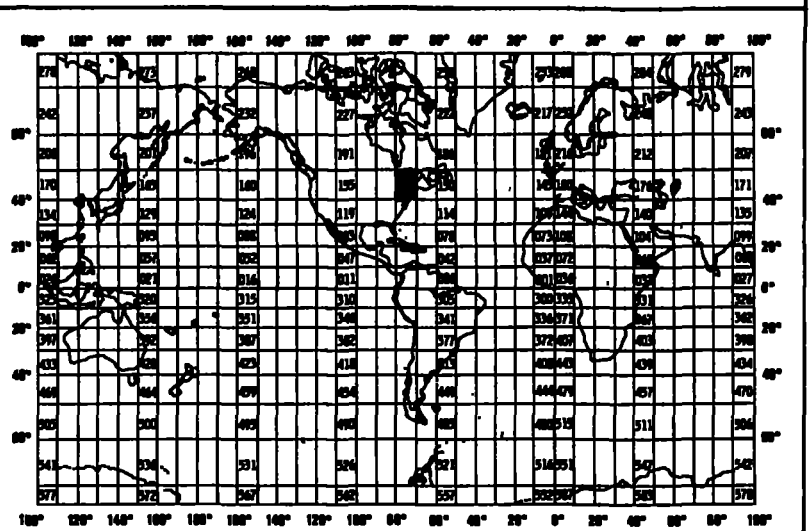
☒ NO ☐ YES ☐ PART *(SPECIFY BELOW)*

10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER *(AND ADDRESS IF OTHER THAN IN ITEM-1)*

ROBERT REID
201-872-0202 X220
FTS 342-0220

11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.

GENERAL AREA



B. SCIENTIFIC CONTENT

Include enough information concerning manner of observation, instrumentation, analysis, and data reduction routines to make them understandable to future users. Furnish the minimum documentation considered relevant to each data type. Documentation will be retained as a permanent part of the data and will be available to future users. Equivalent information already available may be substituted for this section of the form (i.e., publications, reports, and manuscripts describing observational and analytical methods). If you do not provide equivalent information by attachment, please complete the scientific content section in a manner similar to the one shown in the following example.

EXAMPLE (HYPOTHETICAL INFORMATION)

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
Salinity	‰	Nansen bottles	Inductive salinometer (Hytech model 5510)	N/A (Not applicable)
		STD Bissett-Berman Model 9006	N/A	Values averaged over 5-meter intervals
Water color	Forel scale	Visual comparison with Forel bottles	N/A	N/A
Sediment size	ϕ units and percent by weight	Ewing corer	Standard sieves. Carbonate fraction removed by acid treatment	Same as "Sedimentary Rock Manual," Folk '65

(SPACE IS PROVIDED ON THE FOLLOWING TWO PAGES FOR THIS INFORMATION)

B. SCIENTIFIC CONTENT

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
In "Methods" section provided previously				

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B. SCIENTIFIC CONTENT

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING

C. DATA FORMAT

This information is requested only for data transmitted on punched cards or magnetic tape. Have one of your data processing specialists furnish answers either on the form or by attaching equivalent readily available documentation. Identify the nature and meaning of all entries and explain any codes used.

1. List the record types contained in your file transmittal (e.g., tape label record, master, detail, standard depth, etc.).

2. Describe briefly how your file is organized.

3-13. Self-explanatory.

14. Enter the field name as appropriate (e.g., header information, temperature, depth, salinity.

15. Enter starting position of the field.

16. Enter field length in number columns and unit of measurement (e.g., bit, byte, character, word) in unit column.

17. Enter attributes as expressed in the programming language specified in item 3 (e.g., "F 4.1," "BINARY FIXED (5.1)").

18. Describe field. If sort field, enter "SORT 1" for first, "SORT 2" for second, etc. If field is repeated, state number of times it is repeated.

See sample listings

C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

1. LIST RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE
GIVE METHOD OF IDENTIFYING EACH RECORD TYPE

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

3. ATTRIBUTES AS EXPRESSED IN ☐ PL-1 ☐ ALGOL ☐ COBOL ☐ FORTRAN ☐ _____ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:
NAME AND PHONE NUMBER _____
ADDRESS _____

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE ☐ BCD ☐ BINARY ☐ ASCII ☐ EBCDIC ☐ _____

6. NUMBER OF TRACKS (CHANNELS) ☐ SEVEN ☐ NINE ☐ _____

7. PARITY ☐ ODD ☐ EVEN

8. DENSITY ☐ 200 BPI ☐ 1600 BPI ☐ 556 BPI ☐ 800 BPI ☐ _____

9. LENGTH OF INTER-RECORD GAP (IF KNOWN) ☐ 3/4 INCH ☐ _____

10. END OF FILE MARK ☐ OCTAL 17 ☐ _____

11. PASTE-ON-PAPER LABEL DESCRIPTION *(INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)*

12. PHYSICAL BLOCK LENGTH IN BYTES

13. LENGTH OF BYTES IN BITS

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		

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RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		

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RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		

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RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		

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D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("✓") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRUMENT IS NOT CALIBRATED
		YOUR ORGANIZATION (√)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (√)	BEFORE OR AFTER USE (√)	BEFORE AND AFTER USE (√)	ONLY AFTER REPAIR (√)	ONLY WHEN NEW (√)	(√)

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```
Password:
 accNo   fleA refNo  proj inst ship    startDate  cruise   catId
 ------- ---- ------ ---- ---- ------- ---------- -------- ----------
 8300070 C100 BL2821 9999 31B4 3199    1972/01/01 1-4           322090

(1 row affected)
```

8300070

```
Password:
 accNo   fleA refNo  ship staCnt recCnt startDate  endDate
 ------- ---- ------ ---- ------ ------ ---------- ----------
 8300070 C100 BL2821 3199 142    NULL   72/01/01   75/12/31

(1 row affected)
```