APPENDIX A

ELEMENTS OF MONITORING PROGRAM

EUTROPHICATION/HYPOXIA

Task	Subtask	# of Stations		Frequency		Parameters	Comments
		Proposed	Existing	Proposed	Existing		
NUTRIENT INPUTS	Municipal STPs	No change	50-CT 21-NY	No change	CT-Biweekly NY-Monthly	See attached	Adequately characterized by existing compliance monitoring programs carried out by municipalities.
	Tributaries	No change	8	Twice/month or flow weighted	11 times per year	See attached	Characterized by existing USGS programs at most downstream stations. Frequency of monitoring should be increased.
	Coastal runoff	-	-	Periodically update land use	Estimates based on land use		Land cover, vegetation type, and land use in downstream segments should be updated and appropriate adjustments made to the runoff coefficients. Subwatersheds should be monitored to document runoff coefficients and extrapolate to areas not monitored.
	Groundwater	-	-	-	-	-	Largely accounted for either as tributary loads or as coastal runoff estimates.
	Atmospheric Deposition	3	2	Continuous	Continuous	Dry deposition HNO_3, SO_4^{-2}, SO_2, NO_3^-, NH_4^+, total N, and total P Wet deposition CL^-, P, NO_3^-, NH_4^+, total N, total P, SO_4^{-2}, pH, TOC, and cations	Inputs have been estimated but not adequately characterized, although they are the subject of a CTDEP investigation. Data should be evaluated.
	Industrial sources	No change	3	No change	Weekly	See attached	Adequately covered by existing programs.
	CSOs	-	-	-	-	-	Not routinely monitored. Data on flow and concentrations are available. Nothing new needed.
	Boundaries	2	0	Continuous	None	Acoustic Doppler Current Profilers; one in the East River, one in the Race	Inputs across the boundaries at the two ends aren't adequately characterized.
WATER COLUMN	Water chemistry	14 axial and 4 lateral in 2 cross-sections	10 axial	Monthly	Monthly	Surface and bottom samples for parameters in Exhibit A. DO,T,C, throughout water column	Need to add 4 axial and 4 lateral stations to existing NYCDEP and CTDEP programs. Most of the required parameters are now measured except for particulate organic carbon, total inorganic carbon, major phytoplankton components and hydrogen sulphide.
	Additional Dissolved Oxygen Profiles	28-38	57	Fortnightly from May to September	Fortnightly from May to September	DO,T,C throughout water column	The CTDEP Open Water Fishery Survey and ISC sampling program form the base for a higher frequency summer sampling effort to resolve temporal changes in DO. Data from the CTDEP, ISC and EMAP-E should be analyzed to establish a diagnostic summer sampling scheme.
BOUNDARY CONDITIONS	Water Elevations	4	-	Continuous	-	Bottom pressure, T,S	These data are necessary to generate water elevations to drive the model.
SEDIMENTS	Sediment oxygen demand and nutrient flux	3 axial stations	None	Quarterly	-		These data should be combined with primary productivity measurements throughout the water column.
	Inventory of Chl.a	Network of stations in top 3 cm throughout western and central LIS	-	Monthly between January-June and every other month July-December	-		May allow detection of long-term trends in the biological response to changes in nitrogen inputs.

TOXIC CONTAMINANTS

Task	Subtask/Program	# of Stations		Frequency		Parameters	Comments
		Proposed	Existing	Proposed	Existing		
CONTAMINANT INPUTS	Point Sources	No change	68-NY	No change	Monthly	Vary depending on source.	Connecticut and New York require monitoring of a suite of contaminants from point sources to the Sound and its tributaries.
	Tributaries	No change	8	No change	11 times per year	See attached.	USGS monitors contaminants, mostly, metals, at a network of stations on major tributaries.
LONG TERM TRENDS IN SEDIMENTS AND BIVALVES	NOAA's Status and Trends	22	12	Conduct additional local harbor surveys once every 4 years	Biennial	Organic chemicals and trace metals	NOAA's NS&T program has 10 mussel watch sites and 2 benthic surveillance sites, investigating contaminants in benthic fish, sediments, and bivalves. Proposal is to add 10 sites in local harbors every 4 years.
	EPA's EMAP	10	10	once/year	once/year	Organic chemicals and trace metals	EMAP visits 10 stations randomly selected from 40 sites.
	EPA's R-EMAP						Intensive sampling program through 1993-94.
EDIBLE FISH AND SHELLFISH		To be developed		To be developed		Organics, metals	To ensure compliance with the newly proposed FDA fish safety initiative, a comprehensive monitoring program for toxic substances in edible fish and shellfish should be implemented. Current programs are conducted by the states of Connecticut and New York, but at a minimal scale.

PATHOGENS

Task	Subtask/Program	# of Stations		Frequency		Parameters	Comments
		Proposed	Existing	Proposed	Existing		
CONTAMINANT INPUTS	Point Sources	No change	All Sources	No change	CT-Biweekly NY-Monthly		
BATHING WATERS	New York	No change	27-Nassau Co. 40- Suffolk Co., 205-Westchester Co.	No change	Weekly, April-September	Add *Enterococci* to total and fecal coliform measurements	State and local agencies perform compliance monitoring for bathing beach standards.
	Connecticut	No change	30 towns monitor local beaches; the state monitors 3 state beaches	No change		Continue *Enterococci* measurements	
SHELLFISH	New York	No change	1,000-1,200	5-20 annually	5-20 annually	Total and fecal coliform	Monitoring must follow the National Shellfish Sanitation Program guidelines, which define indicators and sampling conditions. It is recommended that monitoring for Paralytic Shellfish Poisoning be expanded to prevent potential health problems.
	Connecticut	No change	567	Varies depending on classification of areas	Varies depending on classification of areas.	Fecal coliform	
	Paralytic Shellfish Poisoning (PSP)	-	-	-	-	-	Although there has been no indication of occurrence of paralytic shellfish poisoning in shellfish beds in New York State, the Long Island Sound Study recommends monitoring as a precautionary activity to fully protect the public health.

LIVING MARINE RESOURCES

Task	Subtask/Program	# of Stations		Frequency		Parameters	Comments
		Proposed	Existing	Proposed	Existing		
LIVING RESOURCES	Open Water Finfish Survey	No change	40-45 stratified by water depth	No change	Biannually, Spring and Fall	Species abundance and composition, Length, Growth, Mortality	Currently being done by CTDEP. No significant alteration of their program is necessary.
	Benthic Macrofauna Survey	No change	10-15 in main stem	No change	annually in summer	Species abundance and composition, number and abundance of sensitive taxa	Currently being done be EPA EMAP program. May need to supplement EMAP sampling if the program is reduced from annual sampling.
	Lobster Surveys			monthly for 1 year, triennially	NY-quarterly CT-yearly	Abundance, distribution, and condition	Some enhancement of the NYSDEC commercial lobster pot sampling program and the CTDEP larval/juvenile lobster assessment program is needed.
	Plankton Community Survey	14 axial	10 axial	bi-weekly in spring bloom, monthly remainder of year	monthly	Relative abundance of dominant plankton, Chl. a	Partly covered by existing NYCDEP and CTDEP sampling programs. Requires expansion of latter program to include plankton sampling and increased sampling during bloom period.
	Nearshore Fishery Survey	Select embayments	-	Fall		Identification of species, sex, size, and length	Should build upon work conducted by the CTDEP. NYSDEC would need to initiate a complementary program.
HABITAT	Survey and Inventory	Throughout LIS and tributaries				Areal extent and measures of quality of major habitats and resources	LIS GIS database under development using information from existing federal and state inventory programs. Additional resources are needed to refine the database and for subsequent updates.

01209710 NORWALK RIVER AT WINNIPAUK, CT

LOCATION.--Lat 41°08'07", long 73°25'36", Fairfield County, Hydrologic Unit 01100007, on Perry Ave., 0.6 mi south of Winnipauk, and 0.3 mi upstream from confluence of Silvermine River.

DRAINAGE AREA.--33.0 mi².

PERIOD OF RECORD.--October 1980 to current year

REMARKS.--Discharges shown for this location are computed by determining the discharge for station 01209700, 2.1 mi north, and multiplying by a factor of 1.1, which is the ratio of the drainage areas of the two stations.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT											
24...	1050	14	310	8.40	13.0	14.0	1.7	13.9	134	560	800
NOV											
14...	1120	30	335	7.80	0.5	3.0	1.7	14.3	105	K14	96
DEC											
17...	1145	66	270	7.60	5.5	4.0	0.70	13.2	100	60	92
JAN											
14...	1130	77	280	7.80	6.5	2.0	0.66	14.3	104	80	50
MAR											
13...	1300	75	250	7.40	3.0	3.0	61	13.7	102	92	700
APR											
23...	1145	66	243	7.40	10.0	12.5	7.7	11.4	107	130	130
MAY											
15...	1040	37	252	7.50	16.5	14.5	1.3	10.6	105	700	1400
JUN											
18...	1030	10	280	7.80	27.0	20.0	5.9	10.1	111	160	36
JUL											
08...	1215	9.8	288	7.70	26.0	20.0	1.4	9.7	107	160	1200
AUG											
12...	1120	11	297	8.40	27.0	22.0	1.9	12.4	142	560	400
SEP											
02...	1245	9.1	290	8.30	27.0	19.0	1.4	12.4	134	200	38

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
OCT										
24...	100	--	28	8.2	--	21	42	--	196	0.27
NOV										
14...	110	41	29	9.4	70	21	45	10	187	0.25
DEC										
17...	84	--	22	7.0	--	21	37	--	155	0.21
JAN										
14...	80	33	21	6.7	47	64	51	9.3	154	0.21
MAR										
13...	72	--	19	6.0	--	19	34	--	136	0.18
APR										
23...	83	--	22	6.8	--	18	33	--	142	0.19
MAY										
15...	86	32	23	6.9	54	19	33	6.5	145	0.20
JUN										
18...	93	--	25	7.5	--	21	41	--	183	0.25
JUL										
08...	94	31	25	7.6	63	20	46	5.2	173	0.23
AUG										
12...	94	--	25	7.6	--	22	36	--	165	0.22
SEP										
02...	95	--	25	8.0	--	19	34	--	164	0.22

01209710 NORWALK RIVER AT WINNIPAUK, CT--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)
OCT 24...	7.41	200	--	<0.010	0.200	<0.010	--	0.40	0.60	<0.010
NOV 14...	15.3	207	--	<0.010	0.400	<0.010	--	0.80	1.2	0.070
DEC 17...	27.6	167	--	<0.010	0.600	0.040	1.2	1.2	2.0	0.020
JAN 14...	32.0	164	--	<0.010	0.800	0.020	0.68	0.70	1.5	0.030
MAR 13...	27.5	275	--	<0.010	0.600	0.030	0.67	0.70	1.3	0.080
APR 23...	25.3	172	--	<0.010	0.300	<0.010	--	0.30	0.60	0.040
MAY 15...	14.5	166	--	<0.010	0.400	0.030	1.1	1.1	1.5	0.050
JUN 18...	5.04	209	0.590	0.010	0.600	0.030	0.27	0.30	0.90	0.080
JUL 08...	4.58	207	--	<0.010	0.400	0.020	0.78	0.80	1.2	0.020
AUG 12...	4.72	175	--	<0.010	0.400	0.010	0.49	0.50	0.90	0.050
SEP 02...	4.03	183	--	<0.010	0.200	0.020	0.48	0.50	0.70	0.040

DATE	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 24...	<0.010	<1	<1	6	--	<5	--	<1	19	3.5
NOV 14...	0.050	<1	<1	5	160	<5	19	3	31	5.6
DEC 17...	0.020	<1	<1	3	--	5	--	<1	36	3.1
JAN 14...	0.020	<1	<1	4	170	<5	45	3	33	3.6
MAR 13...	0.010	<1	<1	4	--	<5	--	2	15	8.4
APR 23...	0.020	<1	<1	3	--	<5	--	<1	14	2.8
MAY 15...	0.020	<1	4	2	90	6	47	<1	21	6.2
JUN 18...	0.010	<1	<1	4	--	<5	--	1	17	3.3
JUL 08...	0.020	<1	1	1	52	<5	69	3	8	3.1
AUG 12...	0.030	<1	<1	4	--	<5	--	4	10	3.8
SEP 02...	0.030	<1	2	4	--	<5	--	1	<3	4.3

Pfizer Groton, CT

LONG ISLAND SOUND STUDY 1993

INDUSTRIAL PARAMETERS

DATE	DSN	FLOW	TKN	NH3-N	ORGANIC- N	NO2- N	NO3-N	CACO3	PO4-P
		MGD	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
12-Jan-93	O1H		0.28	0	0.28	0	0.37	105	0.02
14-Jan-93	O1H		0.11	0	0.11	0.01	0.55	105	0.06
16-Jan-93	O1H		0.22	0	0.22	0.01	0.54	105	0.03
18-Jan-93	O1H		0.11	0	0.11	0	0.27	103	0
20-Jan-93	O1H		0.28	0	0.28	0	0.26	106	0.04
22-Jan-93	O1H		0.34	0	0.34	0.02	62	104	0.08
24-Jan-93	O1H		0.17	0	0.17	0.03	0.61	109	0.06
26-Jan-93	O1H		0.17	0	0.17	0	0	109	0.11
28-Jan-93	O1H		0.17	0	0.17	0	0	107	0
1-Feb-93	O1H		0.22	0	0.22	0	0	103	0.08
3-Feb-93	O1H		0.34	0	0.34	0	0	112	0.79
5-Feb-93	O1H		0.22	0	0.22	0.01	0.53	111	0.05
9-Feb-93	O1H		0	0	0	0	0.24	107	0.02
11-Feb-93	O1H		0.11	0	0.11	0.01	0.71	101	0.34
13-Feb-93	O1H		0.39	0	0.39	0.01	0.71	106	0.09
15-Feb-93	O1H		0.28	0	0.28	0.01	0.63	110	0.07
17-Feb-93	O1H		0.39	0	0.39	0	0.24	104	0.09
19-Feb-93	O1H		28	0	28			105	
21-Feb-93	O1H		0.17	0	0.17	0	0.18	104	0.06
23-Feb-93	O1H		0.28	0	0.28	0.02	0.72	103	0.22
25-Feb-93	O1H		0.22	0	0.22	0.015	0.79	105	0.08
12-Jan-93	OO1	2.36	0.67	0	0.67	0	0.99	79	0
20-Jan-93	OO1	1.98	0.28	0	0.28	0	0.6	94	0.1
26-Jan-93	OO1	1.96	0.28	0	0.28	0	0.88	90	0
1-Feb-93	OO1	1.72	1.18	0	1.18	0	0.55	94	0.14
9-Feb-93	OO1	2.14	0.28	0	0.28	0	0.4	95	0.06
17-Feb-93	OO1	2.15	0.17	0	0.17	0	0.89	85	0.13
21-Feb-93	OO1	2.42	0.17	0	0.17	0.1	0.55	92	0.11
12-Jan-93	OO2	0.95	0.28	0	0.28	0	0.31	105	0
20-Jan-93	OO2	0.95	0	0	0	0	0.25	105	0.03
26-Jan-93	OO2	1.02	0.06	0	0.06	0	0.25	106	0.02
1-Feb-93	OO2	0.91	1.85	0.17	1.68	0	0.25	112	0.03
9-Feb-93	OO2	1.19	0	0	0	0	0.23	106	0.04
17-Feb-93	OO2	1.33	0.11	0	0.11	0	0.22	105	0.1
21-Feb-93	OO2	1.14	0.22	0	0.22	0.1	0	105	0.07

REGIONAL TESTING LABORATORY

1993 AVERAGE PARAMETERS FOR ALL PLANTS

	Influent	PriEff	SecEff	DigSup	Fil/Pre	ThkOvl
pH	*	5.3	*	*	2.9	0.6
Alkalinity mg/l	*	107.0	*	*	177.6	46.4
TN, mg/l	26.5	26.4	13.1	221.8	119.6	40.1
TKN, mg/l	15.4	15.7	5.2	99.3	61.5	20.4
Ammonia, mg/l	16.1	16.8	7.4	145.2	101.7	20.4
Nitrite, mg/l			0.1			
Nitrate, mg/l	0.4	0.4	4.0	0.1	0.5	0.2
OrthoP, mg/l	*	*	1.5	*	*	*
TotalP, mg/l	*	*	1.8	*	*	*

Total Tests = 605

APPENDIX B

WHITE PAPER TITLES & AUTHORS

The Long Island Sound Monitoring Program: Hypoxia
James E. Mackin II

Long Island Sound Monitoring Program: Non-point Sources
John C. Clausen

The Role of Modeling in Monitoring for Hypoxia
John P. St. John

A Monitoring Program for the Living Marine Resources of Long Island Sound
William M. Wise

Toxic Contaminants in Long Island Sound
Nicholas S. Fisher

Recommended Monitoring Programs to Assess the Risk of Infectious Disease Due to Swimming at Beaches and Eating Raw Shellfish Harvested from Long Island Sound
Victor J. Cabelli

A Place for Citizen's Monitoring Programs
Richard Harris

Data Management Issues
Brock Bernstein

The Value of Integrating the EMAP-E and NS&T Federal Programs in The Long Island Sound Monitoring Program
Alessandra Conversi

APPENDIX C

WORKSHOPS PARTICIPANTS

The following people participated in one, or more, of the three Long Island Sound Monitoring Workshops held at the Marine Sciences Research Center. The dates of the workshops were 13 August 1993, November 30 - 1 December 1993, and 12 - 13 January 1994.

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APPENDIX D

WORKSHOPS AGENDAS

AGENDA

"Integration of EMAP-E and NS&T into the LIS monitoring plan[1]"

Marine Sciences Research Center, Stony Brook

Room 120, Bldg. Endeavour

Friday, 13 August 1993

The purpose of this meeting is to discuss how to integrate EMAP-E and NS&T in the Long Island Sound Monitoring plan (LISM)

10:30	Introduction: purpose of the meeting, and what has to be accomplished	Schubel
10:40	EMAP-E in LIS: current and future strategy, preliminary results, goals for the entire program	Paul
11:00	NS&T in LIS: current and future strategy, preliminary results, goals for the entire program	Robertson
11:20	LIS: identified needs for a monitoring plan. What is currently being done.	Tedesco
11:50	open discussion on LIS needs	Conversi
12:20	lunch break	
1:00	group discussion on the integration of EMAP-E and NS&T in the LIS monitoring plan, considering what is available and what is needed; some of the questions to be addressed (not necessarily in this order):	Conversi

- what would be the value *(in sensu lato)*, if any, of integrating LISM, EMAP-E, NS&T?
  - scientific value: would be useful to have LIS data comparable with the rest of the nation?
  - management value: would kind of data/technology in EMAP-E and NS&T would be useful to local managers?
  - economic value: would an integrated plan be economically more efficient than separate plans? Would it be convenient for LISM to utilize EMAP-E and NS&T technology? Could some of the technology be shared between programs?
- do EMAP-E and NS&T, as presently designed, serve the need of the LISM?
- if not, how to integrate them:
  - should/could EMAP-E and NS&T be modified locally to meet the needs of LISM?
  - OR should LISM be tailored around EMAP-E and NS&T?
  - OR how can the existing monitoring by EMAP-E and NS&T be incorporated in the LISM so to satisfy the identified needs?
- technical issues: comparability of sampling and analytical issues.
- design issues: how to integrate different sampling designs.

2:30	coffee break	
2:45	resume discussion	Conversi
4:30	conclusion and recommendations	Schubel
5:15	adjourn	

[1] **EMAP-E** = Environmental Monitoring and Assessment Program-Estuaries; **NS&T** = National Status and Trends; **LIS** = Long Island Sound; **LISM** = Long Island Monitoring plan.

LIS MONITORING WORKSHOP

30 November - 1 December 1993
Marine Sciences Research Center
The University at Stony Brook

Day 1

1000

- Welcome and Introductions — Mark Tedesco
- Overview of Objectives for the Day

1030

- A Statement and Posting of LIS Monitoring Program Goals and Objectives. These Should Be Stated as Hypotheses to be Tested or Questions to be Answered for Each Program Element: Eutrophication, Contaminants, Pathogens and Living Marine Resources.

1115

- Brief Descriptions of Those Components of Existing State, Regional and Federal Monitoring Programs Relevant to Each Program Element.

1200
Working Lunch
(Continue Discussion)

- Listings of What is Measured, How, Where and Why.

1430

- Summation and Posting of the Existing Components.

1530

- Evaluation of the Adequacy of the Existing Monitoring Programs to Test the Hypotheses/to Answer the Questions for Each Program Element of the LIS Monitoring Program.
- The White Papers Will Serve as a Point of Departure for Discussion of Each Program Element. White Paper Authors Will Lead the Discussion.

1730

- Adjourn for Evening

LIS Monitoring Workshop

1 December 1993

Day 2

0830	• Continue Discussion
1030	• Discussion to Close the Gaps. • The Products Will be Draft Monitoring Program Elements for Each Component (Eutrophication, Living Marine Resources, Contaminants, Pathogens): Stations, Parameters, Methods, Frequency of Sampling in Time and Space.
1230	• Working Lunch
1330	• On the Question of QA/QC: What's Needed?
1500	• Program Stability -- What Can Be Done To Increase Stability?
1530	• Wrap-Up: Conclusions and Recommendations. Identification of Tasks to Complete for January Workshop.
1630	Adjourn

LONG ISLAND SOUND MONITORING WORKSHOP

12 January 1994
Endeavour 120

1000	**Welcome and Introductions** *A Brief Overview of Where We Are in the Process, What Remains to Be Done and How We Will Accomplish It in This Workshop*	**Mark Tedesco** **J.R. Schubel**
1100-1230	**Concurrent Sessions in Endeavour 113, 120, 139 and 168, and Challenger 173**	
	Hypoxia and Modeling (Endeavour 120)*	**J.R. Schubel, Facilitator**
	Living Marine Resources (Endeavour 113)	**W.M. Wise, Facilitator**
	Contaminants (Endeavour 139)	**Nick Fisher & J.Kirk Cochran, Co-Facilitators**
	Pathogens (Endeavour 168)	**R.L. Swanson, Facilitator**
	Non-Point Sources (Challenger 173)	**A. Conversi, Facilitator**
1230-1330	**Working Lunch in Plenary** (Endeavour 120) *A Time for Conversation and Concerns*	
1330	**Resume Concurrent Sessions to <u>Complete</u> Design of Monitoring Elements**	***Non-Point Sources Joins Hypoxia in 120**
1530	**Reconvene in Plenary in Endeavour 120 for Brief (15 Minutes!) Summary Reports by Working Groups; Discussion**	
1730	**Adjourn**	

1800	**Catered Dinner in Endeavour 120**	
1900	**An Intermodal Data/Information Super Network Linking Local, Regional and National Monitoring Programs**	**Brock Bernstein Jeff Rosen**
2100	**Adjourn**	

13 January 1994
Endeavour 120

[Small working groups will meet concurrently, if needed, to complete design of individual program elements.]

0830	**The Role of Citizens' Monitoring** (Endeavour 120) *The White Paper by Richard Harris and the Reviewers' Comments Will Provide the Point of Departure for the Discussion*	**J.R. Schubel, Facilitator**
1020	**Break**	
1045	**QA/QC: Putting It All Together** (Endeavour 120)	**J. Kirk Cochran, Facilitator**
1215	**Lunch**	
1300	**Data/Information Management: All the Dimensions** (Endeavour 120) *The White Paper by Brock Bernstein, the Reviewers' Comments, and the Discussion the Evening Before Will Provide the Point of Departure for the Discussion*	**H. Bokuniewicz, Facilitator**
1500	**Break**	
1515	**Summary and Conclusions** (Endeavour 120)	**J.R. Schubel Mark Tedesco**
1700	**Adjourn**	