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NEERS Spring 2004 MEETING PROGRAM

Sunday, March 7, 2004

1:00 – 2:30 PM Meeting Registration, Wyndham Burlington

2:30 – 4:20 PM Oral Presentations, Wyndham Burlington

5:00 – 8:30 PM Reception, ECHO Lake Aquarium and Science Center

Dinner on your own

ORAL PRESENTATIONS

NEWSLETTERS Session Chair = Pam Neubert, ENSR

2:30 Welcome and Introductory Remarks – Marshall Pregnall, NEERS President

2:40 Kremer, J.* and J. Vaudrey

Department of Marine Sciences, University of Connecticut, Groton, CT 06340 SYSTEM METABOLISM USING A(NOTHER) MOORED WATER QUALITY PROFILER IN SHALLOW EMBAYMENTS

3:00 Vaudrey, J.M.P.

Department of Marine Sciences, University of Connecticut, Groton, CT 06340 ECOSYSTEM METABOLISM IN SMALL COASTAL EMBAYMENTS - AN ANALYSIS OF FIELD METHODS.

3:20 Dahlen*, D. T.¹, S. Emsbo-Mattingly¹, C. Hunt¹, and K. Keay² ¹Battelle Memorial Institute, Duxbury, MA 02332; ²MWRA, Boston, MA 02129 COMPOSITIONAL CHANGES IN MASSACHUSETTS COASTAL SEDIMENTS ATTRIBUTED TO THE MWRA WASTEWATER DISCHARGE: A COMPREHENSIVE COMPARISON OF PRE- AND POST-DIVERSION PERIODS

3:40 Swenarton*, J.T., J.F. Foertch, J.M. Vozarik, D.F. Landers, and M. Keser Millstone Environmental Laboratory, Dominion Nuclear Connecticut, Inc., Rope Ferry Rd., Waterford, CT 06385

LONG-TERM (1985-2003) MONITORING STUDIES OF EELGRASS (ZOSTERA MARINA L.) POPULATION DYNAMICS IN EASTERN LONG ISLAND SOUND

4:00 Spencer, L. T.

Department of Biological Sciences, Plymouth State University, Plymouth, NH 03264 NEW ZEALAND ESTUARIES, A VISITOR'S VIEW

Monday, March 8, 2004

9:30 – 12:10 PM Oral Presentations

12:10 – 1:30 PM Lunch

1:30-3:00 PM Poster Session

3:00 – 4:00 PM Oral Presentations

4:00 PM Business Meeting

5:00 – 7:00 PM Social and poster viewing

7:00 - 9:00 PM Banquet

ORAL PRESENTATIONS

Session Chair = Marshall Pregnall, Vassar College

* Presenter, (K) denotes Ketchum prize candidate, (R) denotes Rankin prize candidate

9:30 Abbe, J., Z. Adams, R. Boumans*, J. Cerretti, J. Clark, T. Coe, J. DAgostino, B. Davis, K. Davis, G. deGooyer, S. DeLano, J. Errecart, C. Friede, E. Geczi, M. Hey, B. Huggett, B. Kirk, M. Kreider, S. Lovitz, K. McCutcheon, W. Morgan, L. Noa, J. Roberts, and S. Wheeler

The Rubenstein School of Environment and Natural Resources, The University of Vermont, George D. Aiken Center, 81 Carrigan Drive, Burlington, VT 05405-0088 EXPLORING THE POTENTIAL FOR INTEGRATED WATERSHED PLANNING IN THE LEWIS CREEK BASIN, VERMONT

9:50 Turek, J.G.

NOAA Restoration Center, Narragansett, RI 02882 DIADROMOUS FISH RESTORATION IN THE CONNECTICUT RIVER WATERSHED: PROGRESS THROUGH NOAA'S COMMUNITY-BASED RESTORATION PROGRAM PARTNERSHIPS

10:10 Neubert, M. G.

Biology Department MS 34, Woods Hole Oceanographic Institution, Woods Hole, MA 02543-1049

MARINE RESERVES AND OPTIMAL HARVESTING:

CHARGOGGAGOGGMANCHAUGGAUGGAGOGGCHAUBUNAGUNGAMAUGG

10:30 BREAK

10:50 Zogg, G.P.

Dept. of Biological Sciences, University of New England, Biddeford, ME 04005 EFFECTS OF NUTRIENT LOADING AND FLOODING ON NITROGEN MINERALIZATION IN A HIGH MARSH ECOSYSTEM

11:10 Sheldon*, S. P. 1, S. Twichell 1, and L. A. Deegan²

¹Department of Biology, Middlebury College, Middlebury VT 05753;

² Ecosystems Center, MBL, Woods Hole MA 02543

THE EFFECTS OF LONG TERM NUTRIENT ADDITION ON A SALT MARSH COMMUNITY

11:30 (R) Freeman*, C.J.^{1, 2}, H. Haas¹, S. Warren², L. Deegan¹, and J. Logan¹

The Ecosystems Center, Marine Biological Laboratory Woods Hole, MA 02543

Connecticut College, New London, CT 06320

WHAT MAKES MUMMICHOGS GROW?- THE RELATIONSHIP BETWEEN GROWTH RATES AND GUT CONTENTS OF *FUNDULUS HETEROCLITUS*HELD IN ENCLOSURES ALONG A SALINITY GRADIENT IN A NEW ENGLAND SALT MARSH

11:50 (K) Graf, M.-T.* and G. L. Chmura

Department of Geography and Centre for Climate and Global Change Research, McGill

University, Montreal, QC, Canada

JOHN LUSBY MARSH: A DIKELAND'S RETURN TO SALT MARSH CONDITIONS

12:10 – 1:30 LUNCH (provided at hotel)

1:30 – 3:00 POSTER PRESENTATIONS

*Presenter, (D) denotes Dean prize candidate, (W) denotes Warren prize candidate

POSTER SESSION

Abdelrhman, M. A.

USEPA Office Research and Development, National Health and Environmental Effects Research Lab., Atlantic Ecology Division, 27 Tarzwell Drive, Narragansett, RI 02882 MODELING OF FLUSHING AND LOCAL RESIDENCE TIMES IN 42 EMBAYMENTS IN NEW ENGLAND, USA

(W) Ajaj, J. E.*, J. Eyzaguirre*, A. Rossi*, and D. J. Brousseau Biology Department, Fairfield University, Fairfield, CT 06824. DIETS OF THREE SHALLOW-WATER FISH IN LONG ISLAND SOUND: A FOCUS ON ASIAN CRAB PREDATION

Baker, J.

Massachusetts Office of Coastal Zone Management, 251 Causeway St. Suite 900, Boston, MA 02114

THE MARINE INVADER DATABASE: A STRATEGY FOR TRACKING THE

DISTRIBUTION OF INVASIVE SPECIES IN THE WATERS OF THE NORTHWEST ATLANTIC

Brawley*, J.W.¹, D.J. Yozzo², W. Pabich³, M. Fobert⁴, and T. Benjamin⁴

¹Battelle Memorial Institute, Duxbury, MA 02332; ²Barry A. Vittor & Associates, Inc., Lake Katrine, NY 12449; ³Tetra Tech EM Inc., 125 Cambridgepark Drive Cambridge, MA 02140; ⁴M. Forbert, T. Benjamin, Rizzo Associates, One Grant Street, Framingham, MA 01701

THE DEVELOPMENT OF A RESTORATION PLAN FOR THE WINSEGANSETT EAST MARSH, FAIRHAVEN, MA

Duff*, E.B.¹, R. Buchsbaum¹, and D. M. Burdick²

¹Mass Audubon; ²Jackson Estuarine Laboratory, Department of Natural Resources, University of New Hampshire, 85 Adams Point Rd., Durham, NH 03824 INTEGRATING SCIENCE AND EDUCATION AT THE PLUM ISLAND ECOSYSTEM LONG TERM ECOLOGICAL RESEARCH SITE

(W) Fredericks*, V. L., Williams*, K. E., and P.A. Morgan Dept. of Environmental Studies, University of New England, Biddeford, ME 04005 MONITORING THE EFFECTS OF A NEW DOCK ON A FRINGING SALT MARSH AT THE UNIVERSTIY OF NEW ENGLAND

(W) Heffner*, L.R. and A.M. Pregnall Biology Department, Vassar College, Poughkeepsie, NY, 12604 EFFECTS OF HYPOXIA ON ALGAL GLUTAMINE SYNTHETASE ACTIVITY IN COASTAL POND CORES

Liang, S.-Y., D. Hersh, and W. Leo*
Environmental Quality Department, Massachusetts Water Resources Authority,
Charlestown, MA 02129
MANAGEMENT AND USE OF A LONG-TERM WATER QUALITY
MONITORING DATABASE FOR BOSTON HARBOR AND MASSACHUSETTS
BAY

Mansfield*, A.M., C.D. Hunt, and C.S. Albro.
Battelle, Duxbury, MA, 02332
PLUME TRACKING: LEADING TECHNOLOGIES FOR MONITORING OUTFALL
DILUTIONS AND SEDIMENT RESUSPENSION

(D) Noel, P.E.*, G.A. Hung*, E. L. Heller* and G.L. Chmura Department of Geography (& Centre for Climate and Global Change Research), McGill University, 805 Sherbrooke St. W.; Montreal, QC H3A 2K6 SEARCH FOR THE RECLAMATION SURFACE OF A RECOVERING DYKELAND: SAINTS REST MARSH, SAINT JOHN, NEW BRUNSWICK (W) Watson, O.J.*, L. D. Sanderson*, and G. L. Chmura

Department of Geography, McGill University, 805 Sherbrooke St. West, Montreal, QC H3A 2K6

VEGETATION PATTERNS IN THE SALT MARSH AT LA POCATIERE, QUEBEC

Symposium on Aquatic Monitoring and Indicator Development

Hale, S. S.

Atlantic Ecology Division, U.S. Environmental Protection Agency, 27 Tarzwell Drive, Narrgansett, RI 02882

DEVELOPMENT OF AN INDEX OF BENTHIC CONDITION FOR COASTAL AREAS OF THE GULF OF MAINE

ORAL PRESENTATIONS

Session Chair = Cindy Delpapa, MA Dept. of Fish and Game **3:00 (K)** Kelly, S.J.

Dept. of Biological Sciences, University of Rhode Island, Kingston, RI 02881 THE ESTIMATION OF AGE-SPECIFIC DEMOGRAPHIC PARAMETERS FOR SCUP, *STENOTOMUS CHRYSOPS*, IN LONG ISLAND SOUND

3:20 (K) Calabretta, C. J. * and C. A. Oviatt University of Rhode Island Graduate School of Oceanography, Narragansett, RI 02882 BENTHIC MACROFAUNA IN NARRAGANSETT BAY, RHODE ISLAND: AN EVALUATION OF DIFFERENT APPROCHES FOR DESCRIBING COMMUNITY ASSEMBLAGES

3:40 (K) Hung*, G.A. and G.L. Chmura. Dept. of Geography (and Centre for Climate and Global Change Research), McGill University, 805 Sherbrooke St. W., Montreal, QC H3A 2K6

THE IMPORTANCE OF GEOCHEMICAL NORMALIZATION IN THE INTERPRETATION OF TRACE METAL SEDIMENT DATA: AN EXAMPLE FROM SALT MARSHES OF THE BAY OF FUNDY

4:00 NEERS BUSINESS MEETING

5:00 SOCIAL AND POSTER VIEWING

7:00 BANQUET

Tuesday, March 9, 2004

Symposium on Aquatic Monitoring and Indicator Development

Session Co Chairs = John Brawley, Battelle & Hal Walker, USEPA Atlantic Ecology
Division

8:30 Welcome and Introductory Remarks – Hal Walker

Indicator Development

8:40 Watzin M.C.*, R.L. Smyth, E.A. Cassell, W.C. Hession, R.E. Manning, and D. Wang

University of Vermont, School of Natural Resources, Burlington, VT, 05405 DEVELOPING ECOSYSTEM INDICATORS AND AN ENVIRONMENTAL SCORE CARD FOR LAKE CHAMPLAIN

9:00 Hunt, C. D.¹*, B. Burgan², D. Keeley³, and L. McLeod¹

¹ Battelle, Duxbury, MA; ²US EPA Ocean Coastal Protection Division, Washington DC; ³Maine State Planning Office, August, ME DEVELOPING REGIONAL INDICATORS FOR COASTAL REGIONS– THE

DEVELOPING REGIONAL INDICATORS FOR COASTAL REGIONS—THE ATLANTIC NORTHEAST COASTAL MONITORING SUMMIT

9:20 Foertch*, J.F., J.T. Swenarton, and M. Keser

Millstone Environmental Laboratory, Dominion Nuclear Connecticut, Inc., Rope Ferry Rd., Waterford, CT 06385

ROCKY INTERTIDAL COMMUNITY CHANGES (1979-2003) NEAR MILLSTONE POWER STATION, CONNECTICUT, RELATED TO LOCALIZED THERMAL INPUT AND REGIONAL FACTORS

9:40 Rozsa, R.

CT Department of Environmental Protection, Office of Long Island Sound Programs, Hartford, CT 06106

DECADAL CHANGES OF *ZOSTERA MARINA* IN LONG AND FISHERS ISLAND SOUNDS.

10:00 Short, F. T. and D. M. Burdick*

Jackson Estuarine Laboratory, Department of Natural Resources, University of New Hampshire, 85 Adams Point Rd., Durham, NH 03824

A NUTRIENT POLLUTION INDICATOR (NPI) FOR ESTUARINE ECOSYSTEMS USING EELGRASS

10:20 BREAK

Monitoring Design

10:40 Switzer, D. I.

Ecosystems Assessment Unit, USEPA New England, 11 Technology Drive, North Chelmsford, MA 01863-2431

EPA'S GOALS AND EXPECTATIONS FOR STATE COMPREHENSIVE

MONITORING AND ASSESSMENT STRATEGIES

11:00 Paul, J. F.¹, W. Galloway², G. Pesch², M. Charpentier³, J. Heltshe⁴, D. Cobb², C. Strobel², and H. Walker²*

¹National Health and Environmental Effects Research Laboratory, USEPA, Research Triangle Park, NC 27711; ²Atlantic Ecology Division, USEPA, Narragansett, RI 02882; ³ CSC Corporation, Narragansett, RI 02882; ⁴Univ. of Rhode Island, Kingston, RI 02881

THE USE OF EXISTING MONITORING PROGRAM SITES IN A PROBABILITY SURVEY DESIGH – EVALUATION CRITERIA AND APPLICATION IN NORTHEAST U.S. ESTUARIES

11:20 Neckles*, H. A., and B. S. Kopp USGS, Patuxent Wildlife Research Center, 196 Whitten Rd., Augusta, ME 04330 THE NATIONAL PARK SERVICE VITAL-SIGNS MONITORING PROGRAM: REGIONAL PROTOCOLS FOR TRACKING ESTUARINE NUTRIENT ENRICHMENT

11:40 Dettmann*, E. H.¹, R. B. Moore², K. W. Robinson², H. A. Walker¹, and J. B. Palter³

¹U.S. Environmental Protection Agency (USEPA), ORD, National Health and Environmental Effects Research Laboratory, Atlantic Ecology Division, 27 Tarzwell Dr. Narragansett, RI 02882; ² USGS, New Hampshire/Vermont District, 361 Commerce Way, Pembroke, NH 03275; ³ Duke University, School of Environment and Earth Sciences, Division of Earth and Ocean Sciences Durham, NC 27705 USE OF OUTPUT FROM THE NEW ENGLAND SPARROW MODEL TO ESTIMATE CONCENTRATIONS OF TOTAL NITROGEN IN ESTUARIES

12:00 Halterman, S.¹, B. Howes^{2*}, and R. Samimy²

¹MA Dept. of Environmental Protection Watershed Management and Permitting
 ² School of Marine Sciences and TechnologyUMASS/Dartmouth.
 THE ROLE OF THE MASSACHUSETTS ESTUARIES PROJECT IN
 ESTABLISHING NUTRIENT RELATED WATER QUALITY AND ECOLOGICAL HEALTH INDICATORS

12:20 Trowbridge*, P. R.¹, Jones, S.H.², Siegel, L.S.¹, Neils, D.¹, and W.G. Comstock¹

1New Hampshire Department of Environmental Services, Watershed Management Bureau, Concord, NH, 03302-0095; ² Jackson Estuarine Laboratory, University of New

Hampshire, Durham, NH 03824.

COMPARING PROBABILISTIC AND DETERMINISTIC METHODS FOR ASSESSING AQUATIC LIFE USE SUPPORT IN NEW HAMPSHIRE'S

ESTUARIES

12:40 Symposium Closing Remarks and Discussion

1:00 Meeting Closing Remarks – Marshall Pregnall, NEERS President

