

Department of Marine Resources – Public Health Program Review
Fall, 2007

Review Team members

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JOSEPH J. MIGLIORE
51 Chachapacasset Road
Barrington, Rhode Island 02806

EDUCATION

1979 Roger Williams University, Bristol, RI
 B.S./Environmental Science

1975 Manchester Community College, Manchester, CT
 AS/Science

PROFESSIONAL EXPERIENCE

1985-Present Rhode Island Department of Environmental Management
 Principal Environmental Scientist, 1993-Present
 Senior Environmental Scientist, 1988-1993
 Principal Engineering Technician, 1986-1988
 Senior Engineering Technician, 1984-1986

Present responsibilities include: the initiation, maintenance and development of state programs related to water quality management, the management of programmatic statistical and monitoring data, the supervision of four to six staff members in the Shellfish Section of the Office of Water Resources. As a Program Supervisor, I am responsible for grant procurement and administration, regulatory development, I represent the program as an expert witness and I act as liaison between Department and Federal, State, Regional, and Local environmental and industry groups.

Other responsibilities include: Operation of monitoring vessels, routine maintenance and repairs (as required), purchasing of boats, motor vehicles, computers and other program related equipment.

I am also responsible for the management and oversight of the following programs within the Section:

Shellfish Growing Area Classification

To oversee all steps of the State's Shellfish Harvesting Water Certification Program as required by the National Shellfish Sanitation Program and State law. This involves water monitoring and classification by the collection of water samples to be analyzed primarily for bacteria and other parameters. I schedule and supervise staff who collect samples and interpret the results for the program. The sample results are then reviewed and managed in a database. Charts, reports and statistics are made available as public information furnished upon request, published in the local newspaper and maintained on the RIDEM web site. Bacteriological results are reviewed in conjunction with *RI Comprehensive Sanitary Shoreline Survey reports*, which provide the necessary information to classify state waters for the harvesting of shellfish.

Boat Sewage Management Program

I have been responsible for the development, initiation of state legislation, public education and formulation of the state application for the designation and implementation of the first EPA-designated statewide marine water "no discharge" area. As a result of concerns about increasing restrictions on shellfish harvesting and water quality certification, an effort was undertaken to declare all waters of the state to be "no discharge" areas for marine sanitation wastes, which have been linked to bacteriological contamination of shellfish.

This effort included the creation and adoption of a state law giving state and local officials enforcement powers and the ability to impose penalties for boaters who were found to be discharging sewage in Rhode Island waters. The program also focuses on establishing pump-out facilities for use by boaters and provides grants for pump-out facilities through funds acquired through the Federal Clean Vessel Act. The program has been promoted through public education outreach programs that I have directed as well as promotional efforts that I have participated in, including radio and television interviews, magazine articles, audio and video displays and other media releases. This program strives for continuous improvement with the assistance of an ongoing stakeholders group composed of scientists, industry representatives and members of the boating community. As a result of this effort, I have received the RIDEM Director's Distinguished Service Award, a Special Citation from the U.S. Food and Drug Administration and a USEPA Environmental Merit Award.

Special Area Studies

I initiated and assisted in studies with the Northeast Technical Support Unit (NETSU) of the U.S. Food and Drug Administration (USFDA) related to the classification of shellfish harvest areas. Past studies have been completed in Mt. Hope Bay, Greenwich Bay, and The Great Salt Pond in Block Island.

Bathing Beach Monitoring

Supervision of monitoring program for state owned and operated beaches as required in association with the R.I. Department of Health.

Previous positions in the Division included many of the same tasks noted above, however, positions offered reduced levels of latitude in exercising independent judgement. Final work products were subject to a supervisor for review.

1981-1985 Rhode Island Department of Health

Field surveillance and monitoring of public and groundwater supplies; water system surveys; emergency response, cross connection; well and watershed development; as well as other related duties.

RESEARCH EXPERIENCE

Wetland Salinity Vegetation Study: Hundred Acre Cove, Barrington, RI

Drinking Water Quality Study: Bristol County Water Supply (Total trihalomethane level studies)

Town of New Shoreham (Block Island) Hydrographic Dye Study of the Great Salt Pond

TRAINING COURSES

Groundwater Pollution and Hydrology

Principles and Practices of Wastewater Treatment

U.S. Food and Drug Administration (Shellfish Sanitation Branch) Growing Area surveys

NOAA Organoleptic training

RI Office of Training and Development Training for Supervisors

PROFESSIONAL CITATIONS

RIDEM Director's Distinguished Service Award

Special Citation from the U.S. Food and Drug Administration

USEPA Environmental Merit Award

RI Governor's Citation for Outstanding Effort in the World Prodigy Oil Spill

RI Governor's Citation for Outstanding Effort in the North Cape Oil Spill

RI Governor's Citation for Outstanding Effort in the Penn 406 Oil Spill

Various Local and National publications (Providence Journal, NOAA Coastal Services magazine, Soundings magazine, Sail magazine, Cruising World magazine, RI Boating Monthly, etc.....)

PROFESSIONAL AFFILIATIONS

Northeast Shellfish Sanitation Association

Interstate Shellfish Sanitation Conference

Committee for National Clean Boating Week

Department of the Navy's Technical Review Committee

Rhode Island Marine Trades Association

Rhode Island Quahog Committee

OTHER ACTIVITIES

Barrington Yacht Club, Sail Training Program

Certified SCUBA diver

Instructor (Water Quality and MSD Enforcement) RI Harbormaster Association

US Sailing Association

Sailed across Atlantic Ocean in a 38' boat in 2003

US Skiing Association

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PROFESSIONAL VITAE

25 years of environmental experience working directly on Long Island Sound obtaining first hand information and data regarding pollution issues, living resources, and creating contacts with many different local, State and Federal entities.

EXPERIENCE

ENVIRONMENTAL AND PUBLIC HEALTH INSPECTOR	2005-Present
ENVIRONMENTAL CONSULTANT	2005-Present

State of CT Licensed Registered Sanitarian

Darien Health Department and the Westport-Weston Health District

- ❑ Conducts inspection, monitoring, and evaluation of various licensed facilities including food service establishments and daycares.
- ❑ Investigates and reports on various nuisance complaints.
- ❑ Collects samples and assists in the development of lead abatement projects.
- ❑ Develops environmental and public health related policies and protocols including water quality monitoring, public beach management, and shellfish management plans.
- ❑ Prepares various departmental reports and informational presentations.

ENVIRONMENTAL ANALYST III	2003-2005
STATE SHELLFISH STANDARDIZATION OFFICER	2001-2005
ENVIRONMENTAL ANALYST II	1997-2003
ENVIRONMENTAL ANALYST I	1989-1997

State of Connecticut Department of Agriculture/Bureau of Aquaculture - Milford, CT

- ❑ Responsible for the regulatory management and pollution monitoring of twelve western Long Island Sound (LIS) towns as part of the Connecticut Shellfish Program in accordance with the National Shellfish Sanitation program (NSSP) Model Ordinance.
- ❑ Responsible for planning, coordinating and implementing pollution surveys, growing area sampling regimes, and special studies, including but not limited to dye dilution and dispersion studies of wastewater pollution control facilities (WPCFs) and tributaries, bacterial studies, runoff, pollutant assessments and evaluation of impacts to LIS and the shellfish resources.
- ❑ Provided technical assistance and conducted cooperative pollutant and resource studies with the Connecticut Department of Environmental Protection (DEP), local Conservation Departments, local Health Departments, US Food and Drug Administration (FDA), and local Shellfish Commissions.
- ❑ Presented and participated in State and local watershed group meetings, public hearings, and harbor management and local shellfish commission meetings involving projects including marinas, docks, and dredging providing comments regarding impacts to shellfish habitats and resources.
- ❑ Organized detailed property-by-property surveys, including marinas, assessing town records for subsurface sewage disposal systems (SSDS), public sewer and storm collection systems.

- ❑ Conducted shoreline surveys identifying and assessing point and non-point pollution sources.
- ❑ Conducted resource assessment surveys, monitoring, and resource utilization assessments evaluating impacts to habitats and populations, including seed oyster set surveys.
- ❑ Assessed WPCF operation and effectiveness.
- ❑ Enacted emergency closures due to point discharges and non-point runoff after severe storms, toxic algal blooms and chemical contamination, such as oil, lead and PCBs. Statistically analyzed and interpreted sample collection results and associated data, determined trends, and prepared reports of findings to the FDA.
- ❑ Utilized global positioning systems (GPS) to integrate point and non-point pollution sources into geographic information systems (GIS).
- ❑ Drafted agency proposals and policies, and reviewed proposals for regulatory changes related to commercial and recreational shellfishing activities in LIS.
- ❑ Developed Memorandums of Understanding (MOUs) with municipal departments including but not limited to Health, Conservation, Police, and Public Works, detailing responsibilities with regards to the operation and management of shellfishing programs.
- ❑ Reviewed, provided written comments, and represented the Agency regarding the impacts of pollutants and regulated anthropogenic activities, such as marinas and docks, on shellfishing areas and shellfish resources in LIS and impact(s) to the commercial industry and public trust with regards to reports, studies, applications and projects presented from the Connecticut DEP, United States Environmental Protection Agency (EPA), United States Department of Agriculture (USDA) and the US Army Corps of Engineers (ACOE).
- ❑ Testified as an expert witness on matters involving shellfish resources and public health.
- ❑ Served as State Shellfish Standardization Officer and trained Environmental Analysts to conduct NSSP-MO and FDA shellfish inspections.
- ❑ Conducted shellfish harvester/dealer inspections and determined licensing conditions.
- ❑ Requested administrative hearings, recommending penalties including license amendment, suspension or revocation, evidencing violations as afforded through national regulations and Connecticut General Statutes (CGS).
- ❑ Reviewed program deficiencies and evaluated compliance in accordance with CGS, the FDA Code of Federal Regulations, and the National Shellfish Sanitation Program (NSSP) Model Ordinance.

MARINE BIOLOGICAL/MICROBIOLOGICAL TECHNICIAN 1982 – 1989
National Marine Fisheries Service - NOAA — 190 Rogers Avenue, Milford, CT 06460

- ❑ Responsible for the aquacultural rearing and experimentation with molluscan shellfish.
- ❑ Conducted various shellfish pathology, habitat and resource studies throughout LIS.
- ❑ Collected and analyzed samples of water, shellfish and sediments for bacterial isolates, and chemical and biological parameters, including but not limited to dissolved oxygen, salinity, temperature, and plankton.

Administrative and Community Involvement

- ❑ Develops Memorandums of Understandings, protocols, and shellfish resource management plans.
- ❑ Plans and coordinates public health events and forums offering education, developing informational pamphlets, offering training, and health testing for the general public.
- ❑ Set-up department displays, prepares and disseminates information at local fairs, local community organizations and school environmental programs.
- ❑ Prepares and reviews various reports, including compliance documents and grant proposals.

- ❑ Represented the Connecticut Shellfish Program and participated on committees at the biannual ISSC, and the regional Northeast Shellfish Sanitation Association (NESSA), regional Tri-state Sewage Bypass Workgroup, CT Sea Grant, Harbor Management Commission, Shellfish Commissions, local water quality committees, and the Northeast Shellfish Sanitation Officers (NESSO) annual meetings.
- ❑ Organized and moderated regional shellfish meetings.
- ❑ Maintains a reference library of LIS, pollution, and public health information, studies and data.
- ❑ Conducts student projects involving storm drain stenciling, horseshoe crab surveys, water quality monitoring and stream runoff/erosion impacts providing community presentation. (2002-2006)
- ❑ Provides instruction in Red Cross life saving skills and Association of Food and Drug Officials Seafood HACCP and Sanitation Principles training.

Professional Organizations:

- Westport Shellfish Commission – Health Department representative member - 2007
- Connecticut Environmental Health Association (CEHA) – Active member 2005-present
- Northeast Shellfish Sanitation Association (NESSA) – Active member 1990-present and 2005 President and regional meeting coordinator
- National Registry for Food Safety Professionals (NRFSP) – Qualified Food Operator Instructor 2006-present
- Association of Food and Drug Officials (AFDO)– Seafood HACCP and Sanitation Instructor 2006-present
- Northeast Shellfish Standardization Officers Association (NESSO - USFDA) – CT State Shellfish Standardization Officer 2001-2005
- Interstate Shellfish Sanitation Conference (ISSC) – Participating member 1997-2005
- American Red Cross – Milford Chapter –CPR Instructor and Emergency Response Volunteer 1982-2007
- CT Sea Grant – Seafood HACCP Instructor and Grant Panel Review Member 2001-2005

EDUCATION

Southern Connecticut State University — 501 Crescent St., New Haven, CT 06515

Bachelor of Science, Biology 1980 – 1984

Graduate coursework (27 credits) - Microbiology 1985 – 1989

ADDITIONAL EDUCATION, SKILLS, TRAINING AND CERTIFICATIONS

□ State of CT Licensed Registered Sanitarian	2007
□ CT Department of Public Health — Lead Inspector and Lead Risk Assessor	2006
□ FDA - Plan Review training course	2006
□ CT Department of Public Health — Food Defense Awareness Training	2006
□ CT Department of Public Health — Certified Phase I Subsurface Sewage System Inspector	2006
□ CT Department of Public Health — Radon and Asbestos Training	2006
□ CT Department of Public Health - RMD LPA-1 Lead Analyzer training	2006
□ National Registry for Food Safety Professionals – Qualified Food Operator Instructor	2006
□ National Environmental Health Association — Qualified Food Manager certification	2006
□ National Environmental Health Association — Epi-Ready Investigation training	2006
□ Association of Food and Drug Officials: Seafood HACCP and Sanitation Principles Instructor certification	2006
□ Northeast Shellfish Sanitation Association - President and regional meeting chair	2005
□ CT Environmental Health Association — Crisis and Risk Communication course	2005
□ CT Environmental Health Association — Incident Command System/National Incident Management System course	2005
□ CT Environmental Health Association — Conducting Epidemiological Investigations	2005
□ CT Department of Public Health — Conducting Environmental Investigations course	2005
□ American Red Cross CPR and First Aid Instructor	1982 – present
□ Red Cross Disaster Services Trained Volunteer — Mass Care/Shelter Operations	2005 – present
□ CT Department of Public Health — Food Service Inspection course and certification	2004
□ US Food and Drug Administration (FDA) — Organoleptic training course	2003
□ Notary Public	2003 – present
□ FDA Shellfish Standardization Officer recertification	2002
□ CT Sea Grant - Seafood HACCP Instructor	2001 – present
□ FDA State Shellfish Standardization Officer — certification	2001
□ Hazard Analysis and Critical Control Point (HACCP) Alliance training course	1997
□ HACCP Regulator training course	1997
□ CT registered boater	1997 – present
□ CT Safe Boaters Certificate	1997
□ USFDA Hazard Analysis and Critical Control Point (HACCP) training course	1996
□ USFDA Growing Area Classification and Pollution Assessment training course	1996
□ USFDA Fundamentals of Shellfish Plant Sanitation course	1994
□ USFDA Seafood Safety training course	1992
□ USFDA Non-point Pollution in Shellfish Sanitation course	1990
□ USFDA Sanitary Shoreline Survey Procedures course	1989

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The following is a brief and non-inclusive summary highlights of my job experiences within FDA:

Consumer Safety Officer/Investigator 1972 -1975: Routinely investigated interstate manufacturers and wholesalers of various foods and pharmaceuticals for their compliance with the requirements of the Federal Food Drug and Cosmetic Act the latter time was spent specializing in aquaculture and seafood operations. Also, routinely performed foodborne illness follow-up and investigations including victim and family interviews and tracebacks. By request from the State Department and National Marine Fisheries Service assisted in trouble-shooting problems associated with shrimp aquaculture in Central America.

Regional Shellfish Specialist 1975 - 1995: Routinely evaluated shellfish sanitation programs in the FDA Region IV which later became the Southeast Region of the Food and Drug Administration (NC, SC, GA, FL, AL, MS, TN, KY) and the countries of New Zealand and Australia for their conformity with the National Shellfish Sanitation Program guidelines, the ISSC Model Ordinance and the Federal Food Drug and Cosmetic Act and other such applicable laws and regulations. These annual evaluations would routinely include: reading, understanding and making specific recommendations for improvement to specific laws and regulations pertaining to all aspects of shellfish sanitation including patrol, harvest enforcement, prosecutions and adjudications, shellfish harvest, processing and distribution, harvest area classification, depuration and relaying activities; and, on-site and records evaluations of shoreline and sanitary surveys of growing areas including all data analyses, sample stations number and location and timeliness and pollution source evaluation; on-site and records evaluation of patrol activities; on-site and records evaluation of depuration and relaying activities. Also, routinely performed shellfish-borne illness follow-up and investigations including victim and family interviews and tracebacks until CDC took over that primary role in 1985 or thereabouts.

Reported and developed with CDC, follow-up procedures on the first *Vibrio* cases associated with raw oysters in the USA. In coordination with CDCs Dr. Paul Blake, established the initial reporting form for *Vibrio* sp. illnesses for the initial Gulf of Mexico pilot states. *Vibrio* reporting is now mandatory by CDC throughout the USA. Wrote the initial FDA position monograph citing *Vibrio vulnificus* as a major critical human health pathogen in need of immediate control which lead to numerous federal workshops and official policies.

Guided Dr. Karen Steidinger in the official development of the *Gymnodinium breve* (NSP) marine biotoxin contingency plan for the state of Florida. *Gymnodinium* was later renamed *Karenia brevis*.

Chaired a group of professionals in the Center for Veterinary Medicine in identifying and authoring a paper for the FDA Commissioner on current (1988) aquaculture practices and the use or misuse of drugs in that industry.

Routinely and primarily developed the training courses and lectures for shellfish personnel training and officially formally and on-site trained other federal, state and international shellfish specialists in all aspects of the National Shellfish Sanitation Program including but not limited to history, appropriate laws and regulations, harvest area patrol, growing area classification and management plans, depuration and control, relaying and harvest control.

Developed the initial format still in use today for sanitary surveys and reports.

Routinely assisted the technical services unit in the performance of drogue and dye studies in the evaluation of pollution sources both direct and indirect, point source and non-point source.

Selected by the ISSC as the sole FDA Shellfish Specialist to follow-up on the evaluation of the only two states shellfish programs to have ever been designated by the ISSC as in non-conformity (un-resolved issue) with ISSC guidelines.

Associate Director Gulf of Mexico Program 1995-2006: Served as the official marine biologist and public health consultant for this multi-federal state/federal and citizen partnership whose primary goals were to facilitate collaborative actions to protect, maintain, and restore the health and productivity of the Gulf of Mexico. The partnership included representation from state and local governments and the citizenry in each of the five Gulf States; the private sector (business and industry); federal agencies responsible for research, monitoring, environmental protection, and natural resource management; and the academic community. Teams were formed for habitat and public health problem identification and problem solving through development of projects designed to address the specific problems affecting the Gulf of Mexico.

Served as the Co Chair of the Public Health Committee guiding the team through the many complex issues affecting the Gulf such as the harmful algal blooms, inadequate sewage treatment, run-off, pollution source identification and mercury in fish, for example; and foremost providing expertise and experience in the nuances and requirements of the National Shellfish Sanitation Program and how it relates to the other state and federal agencies and their requirements in the marine environment.

Served as the sole FDA representative on the Gulf States Marine Fisheries Commission Technical Coordinating Committee and the National Aquatic Invasive Species Task Force Regional Committee.

Convened several workshops to identify and ameliorate any differences in policy and function between Public Health Agencies (Federal (FDA) and State) and Pollution Control Agencies (Federal (EPA) and State) in the classification of waters in which shellfish grow.

Chaired and continue to chair the Interstate Shellfish Sanitation Conference Vibrio Education SubCommittee. Also, continue to be the author of the Public Health section of the Interjurisdictional Management Plan for Oysters under the auspices of the Gulf States Marine Fisheries Commission.