



PEGGY L. MYRE

SUMMARY OF QUALIFICATIONS

- ❖ Sole proprietress of a small business specializing in database design, data management, and environmental graphical user interface applications
- ❖ Sixteen years of experience in information technology, including database management and programming; oceanographic data processing and visualization; sediment quality guideline programming and statistics; and geographic information systems (GIS) mapping and scripting
- ❖ Extensive specialized experience with sediment chemistry, bioassay, and bioaccumulation data; tissue chemistry and effects data; water quality and storm water monitoring data; dredged material monitoring data; seafloor survey data; sediment physical properties data; RI/FS and EIR/EIS related data
- ❖ Scientific training and expertise in marine geochemistry, acoustics, coastal processes, environmental monitoring and regulations, and deep sea coring
- ❖ Coastal and offshore seagoing experience
- ❖ Strengths in strategic planning, public outreach, and bridging the gap between science, software, and intuitive data visualization

WORK EXPERIENCE AND EXAMPLE PROJECTS

Exa Data & Mapping Services, Inc. (Port Townsend, Washington)

President/Senior Consultant January 2002-present

- Design and software lead for integrated, GIS-based risk model for assessing output data from hydrographic models for **King County** lakes, rivers, and watersheds through Toll Environmental (current). Project includes spatial and temporal aggregation of data, with map and graphic output integrating SQL Server, Matlab, and ArcGIS components.
- Lead scientist, data manager, and partner with DAMOSVision Joint Venture working with the **New England Corps of Engineers** to manage dredged material disposal through the Disposal Area Monitoring System (DAMOS) Program (current).
- Compiled sediment quality database for the **Minnesota Pollution Control Agency** for managing the St. Louis River Area of Concern. Project conducted in two phases; most recently completed phase for the Wisconsin side, including development of a user interface for access to the data (2006).
- Re-design PSAMP (Puget Sound Ambient Monitoring Program) fish tissue database and develop data entry forms for shipboard fish processing for **Washington Department of Fish and Wildlife** (2005).
- Design, population, and maintenance of a regional sediment/bioassay/tissue chemistry and benthic infaunal community database in support of development of sediment quality guidelines for Southern California (Southern California Coastal Water Resources Project or **SCCWRP**). Project includes statistical calculations, summary tables, user documentation, and an end-user application to perform sediment quality guideline analysis for users with no database experience (current).



- Database management for the Coastal Protection and Restoration Division (CPRD) of the National Oceanographic and Atmospheric Administration (**NOAA**), including processing and QA of data in a wide variety of formats in support of NOAA's Watershed Database and Mapping projects.
- Design and back-end management of web-based database interface to allow access to sediment contamination data for southern California, called the Joint Agency Aquatic Information Network (JAAIN), funded by the **Port of Los Angeles**, through Jones & Stokes Associates (2005).
- Design and population of a storm water (inputs) database including chemistry, flow, and microbiological data for several agencies in southern California, funded by the Contaminated Sediment Task Force (CSTF) and the Port of Los Angeles, through SCCWRP and **AMEC Environmental** (2004-05).
- Design and management of the GIS-based Massachusetts Ocean Resources Information System (MORIS) for the MA Office of Coastal Zone Management (**MCZM**); Phase III includes fresh and brackish water quality data; system includes a 'smart' data filtering module, and a Stats&Graphs tool that provides utilities to create statistics and graphs for watershed analysis on-the-fly (2002-2003).
- Data manager in support of investigation of sediment quality guidelines for beneficial re-use of dredged material for the San Francisco Bay Dredged Material Management Office (DMMO), through the **Port of Oakland**; project includes development of code to conduct ROC (receiver operating characteristics), logistic regression, and floating point analyses (2003-04).

EVS Consultants (Seattle, Washington)

- Information Services Manager 1999-2002
Manage the underlying database behind NOAA's Coastal Protection and Restoration Division's Query Manager System.
Responsible for IS staff of database programmers and network administrators.
Program manager for the Massachusetts Ocean Resource Information System (MORIS) Project, a GIS-based integrated system with tools for aquaculture siting.

Science Applications International Corporation (Newport, Rhode Island)

- Senior Scientist 1997-1999
Responsible for managing marine programs for state, federal, port, and private industry clients (annual revenues ca. \$1.5M).
Primary programmatic focus on application of information technologies to marine projects including dredging, seafloor mapping, and environmental impact assessments.
Supervise marine science and data management/GIS staff.
- Staff Scientist 1991-96
Specialized expertise in geochemical and geotechnical characteristics of contaminated marine sediment and dredged material.
Deputy Program Manager of the Disposal Area Monitoring System (DAMOS) Program (annual revenues \$1M), including serving as the Database Manager.
Geochemical analysis and diffusion modeling of dredged material and coastal sediments.
Marine acoustic data collection and analysis (single and multi-beam bathymetry, sidescan sonar, CHIRP swept-frequency subbottom).
Designed geographical database management tools for storing, accessing, and analyzing monitoring data to assist environmental regulators.



ENSR (Acton, Massachusetts)

Staff Scientist 1996-97

Responsible for synthesizing two years of water column oceanographic data from Boston Harbor and Massachusetts Bay collected for the Massachusetts Water Resources Authority (MWRA).

Analyses included long-term temporal trends and descriptive statistics of background conditions of temperature, salinity, nutrients, chlorophyll, and productivity.

Developed intuitive synthesis graphics for public documents (i.e., annual reports).

Managed GIS and 3D visualization of monitoring data for annual workshops.

Dames & Moore (San Francisco, California)

Staff Geologist 1990-91

Managed large chemical database (volatile organics and metals) for a groundwater/soil remedial Superfund investigation, including quarterly monitoring, vapor and groundwater extraction remediation, and geophysical log data.

Responsible for coordination between field personnel and commercial laboratories, receiving electronic deliverable data, and QA/QC.

Developed quality control and reporting routines designed for the investigation.

Analyzed inorganic groundwater and soil chemistry data.

Ocean Drilling Program (College Station, Texas)

Seagoing Marine Scientist/Engineer 1988-90

Participated in 5 two-month research cruises aboard the R/V *JOIDES Resolution*.

Responsible for sampling and preserving deep-sea cores and chemistry residues, maintaining a sample database (S1032) on a VAX mainframe, experience in physical properties and underway geophysics laboratories.

Shore-based duties included chemical analysis of sediment for a core preservation research project, and database software development.

Graduate Research Assistant 1985-88

Diatom/radiolarian sample processing and biostratigraphic research, including microphotography and film processing of diatoms.

Student technician (geotechnical properties) aboard ODP Leg 108.

Bureau of Land Management (Cañon City, Colorado)

Student Conservation Association Summer 1982

Assisted in vertebrate (dinosaur) fossil excavation at Garden Park, CO (in association with the Denver Museum of Natural History).

Field mapping, mineral potential assessment (in association with the BLM).

EDUCATION

Master of Science (1990, Oceanography)

Texas A&M University

Thesis: Dissolved Aluminum in the Gulf of Mexico



Sediment/water chemical reactions; control of Al phases by organic/inorganic constituents; acquisition of box core and hydrographic data aboard the R/V Gyre.

Bachelor of Science (1983, Geology)

Northern Arizona University
Major GPA 3.8/4.0; field mapping (AZ, UT, NV)

Non-Degree Educational Experience

2003 Web Database Programming, University of Washington
1999 Program Management I and II, SAIC, Newport, RI
1996 Programming in C, Boston University, Boston, MA
1993 GIS Workshop, Navigating '94, Newport, RI
1992 40-Hour Hazardous Waste Training, Folsom, CA
1991 Project Management Seminar, San Francisco, CA
1989 Geopositioning and Navigation, College Station, TX
1989 Technical Writing, College Station, TX

OTHER SKILLS AND EXPERIENCE

Software

Databases: MS Access, MS Visual Foxpro, MS SQL Server, MySQL, Oracle scripts
Data Processing: Golden Surfer/Grapher, ESRI ArcView/Info with extensions including Spatial Analyst, Mathworks Matlab, GMT, AutoCAD, MS Office
Specialized Software: Sidescan and subbottom acoustic data processing, Hypack navigation software, Seasoft CTD data processing tools, HTML/XHTML
Languages: Visual Basic for Applications, SQL, Fortran, beginning C

Seagoing Experience

Multiple small-vessel surveys throughout Long Island Sound, Massachusetts Bay, the New York Bight, and Puget Sound (1991-present)
R/V Sedco/BP 471 (*Resolution*; 1986-90)
R/V Gyre (student cruises 1985-87)

Field Experience

Marine
Navigation, single beam bathymetry, sediment-profile camera, CTD, towed acoustics (sidescan, subbottom), coring, sediment/tissue sampling (1991-present)
Deep sea coring, seismic surveying, and sediment physical properties (1986-90)
Gravity/piston/box coring, pore water squeezing, rosette, nutrient analyses (1985-87)

Geological
Groundwater well construction and sampling, pump and slug tests (1990-91)
Field mapping, vertebrate fossil excavation (1982)

Professional Memberships

Society of Environmental Toxicology and Chemistry, Pacific Chapter (2003-present)
American Water Resources Association (2000 – present)

SELECTED PUBLICATIONS

Publications with an asterisk (*) were presented at the associated meeting:

- Myre, P.L., J.D. Germano, D.A. Carey, and T.J. Fredette. A 22 year record of dredged material monitoring: results from the field verification program (FVP) mound in Long Island Sound. In press. Submitted to Western Dredging Association Proceedings, June 2006.
- *Myre, P.L., D.E. Vidal, S.M. Bay. 2004. Southern California contaminated sediment database with supporting analysis features, metadata, and website. SETAC, November 2004, Portland, OR
- *Myre, P.L., J.D. Germano, L.B. Read, and T.C. Michelsen. Investigation of screening values for sediment targeted for wetland restoration in San Francisco Bay. SETAC, Puget Sound Section Annual Meeting, June 2004, Port Townsend, WA.
- *Myre, P.L., B.K. Carlisle, J.D. Baker, K.L. Moshenberg, C. Trent. 2003. Coastal nonpoint source monitoring database: Massachusetts Ocean Resource Information System Phase III. American Water Resources Association (AWRA), November 2003, San Diego, CA.
- *Myre P. L., D. S. Carle and S. Snow-Cotter. 2001. Aquaculture siting in Massachusetts (MORIS Phase I): a browsable, integrated metadata database, query, and mapping GIS extension. Coastal GeoTools '01, January 8-11, 2001, Charleston, SC.
- *Myre P. L., P.J. Walter, and M.P. Rollings. 2000. Geotechnical evaluation of sediment data collected in Boston Harbor confined aquatic disposal cells. In: R.E. Randall (Ed.), Proceedings of the Western Dredging Association Twentieth Technical Conference. Warwick, RI, June 25 – 28, 2000, pp. 303-316.
- *Myre (Murray), P. and D.S. Babb-Brott. 1999. The use of interactive GIS for public evaluation of dredging impacts on the Coastal Zone. Coastal GeoTools '99, April 5-7, 1999, Charleston, SC.
- Myre, P.L. and E.C. DeAngelo. 1999. Capacity analysis of CAD sites within Salem, Gloucester, and New Bedford harbors. SAIC Report #467. Submitted to Massachusetts Coastal Zone Management Agency, Boston, MA.
- Myre (Murray), P. E.C. DeAngelo, and H.L. Saffert. 1999. Monitoring results from the first three Mystic River CAD cells. SAIC Report #466. Submitted to Great Lakes Dredge and Dock, East Boston, MA.
- *Myre (Murray), P., T.J. Fredette, P.E. Jackson, S.H. Wolf, and J.H. Ryther, Jr. 1998. Monitoring results from the first Boston Harbor Navigation Improvement Project confined aquatic disposal cell. In: R.E. Randall (Ed.), Proceedings of the Fifteenth World Dredging Congress, Vol. I. Las Vegas, NV, June 28 – July 2, 1998, pp. 415 - 430.
- *Myre (Murray), P., D.A. Carey, T.J. Fredette, and J.H. Ryther, Jr. 1998. Isolation of contaminated sediments in disposal cells: short- and long-term benefits for Boston Harbor. American Geophysical Union abstract, May 26-29, 1998, Boston, MA.
- Myre (Murray), P. 1998. Postcap monitoring of Boston Harbor Navigation and Improvement Project (BNHIP) phase 1: assessment of inner confluence CAD cell. (SAIC Rpt. #413). US Army Corps of Engineers, New England Division, Waltham, MA.



- Myre (Murray), P., Cibik, S.J., Lemieux, K.B., Zavistoski, R.A., Howes, B.L., Taylor, and T.L. Loeder. 1997. First 1996 semi annual water column monitoring report, February-July, 1996. Prepared for the Massachusetts Water Resources Authority, Boston, MA.
- Myre (Murray), P., Cibik, S.J., Lemieux, K.B., Zavistoski, R.A., Howes, B.L., Taylor, and T.L. Loeder. 1997. First and Second 1995 semi-annual water column monitoring reports. Prepared for the Massachusetts Water Resources Authority, Boston, MA.
- Myre (Murray), P. and Selvitelli, P. 1996. DAMOS navigation and bathymetry standard operating procedures. DAMOS Contribution #112 (SAIC Rpt. #290). US Army Corps of Engineers, New England Division, Waltham, MA.
- Myre (Murray), P. 1996. Sediment core chemistry data from the MQR mound, August and December 1991. DAMOS Contribution #103 (SAIC Rpt. # SAIC-92&C105). US Army Corps of Engineers, New England Division, Waltham, MA.
- Myre (Murray), P. 1996. Recolonization of the Mill Quinnipiac River Disposal Mound (MQR): results of a REMOTS survey. DAMOS Contribution #104 (SAIC Rpt. #SAIC-92& C107). US Army Corps of Engineers, New England Division, Waltham, MA.
- *Myre (Murray), P., T.J. Fredette, J.T. Morris, and A.J. Silva. 1995. Monitoring dredged material deposits using swept-frequency subbottom techniques: results of the 1993/94 New Haven Harbor dredging project. New England Environmental Expo, Boston, MA.
- *Myre (Murray), P., T.J. Fredette, and D.A. Carey. 1995. Ambient values of contaminant burdens for the evaluation of dredged sediments. New England Environmental Expo, Boston, MA.
- Myre (Murray), P. 1994. Chemical analysis of sediment sampling at the Massachusetts Bay Disposal Site, 5-7 June 1989. DAMOS Contribution #91, US Army Corps of Engineers, New England Division, Waltham, MA.
- *Myre (Murray), P., D.A. Carey, and T.J. Fredette. 1994. Chemical flux of pore water through sediment caps. In: E.C. McNair, Jr. (Ed.), Proceedings of the Second International Conference on Dredging and Dredged Material Placement, Vol. II. Lake Buena Vista, FL, Nov 13-16, 1994. Amer. Soc. Civ. Eng., New York, pp. 1017-1026.
- *Myre (Murray), P., D.A. Carey, and T.J. Fredette. 1994. Mapping sediment texture at the Massachusetts Bay Disposal Site. New England Estuarine Research Society (NEERS) Spring Meeting Abstracts of Presented Papers and Posters, June 2, 1994, Salem, MA.
- Myre (Murray), P., E. DeAngelo, J. Parker, and T.J. Fredette. 1994. Integrated acoustic seafloor characterization. In: E.C. McNair, Jr. (Ed.), Proceedings of the Second International Conference on Dredging and Dredged Material Placement, Vol. I. Lake Buena Vista, FL, Nov 13-16, 1994. Amer. Soc. Civ. Eng., New York, pp. 295-303.
- *Myre (Murray), P., M.B. Wiley, D. Pabst, and B. May. 1994. Subbottom profiling of a sand capped disposal mound. In: E.C. McNair, Jr. (Ed.), Proceedings of the Second International Conference on Dredging and Dredged Material Placement, Vol. II. Lake Buena Vista, FL, Nov 13-16, 1994. Amer. Soc. Civ. Eng., New York, pp. 1285-1294.
- *Myre (Murray), P., J.H. Parker, D.A. Carey, and T. J. Fredette. 1993. Grain size distribution at the Massachusetts Bay Disposal Site inferred from acoustic impedance: assessing anthropogenic



and natural sedimentary microenvironments. Geol. Soc. America Abstracts with Programs, Vol. 25, p. 128.

Myre, P.L. 1990. "Dissolved Aluminum in the Gulf of Mexico." Texas A&M University. M.S. Thesis. 64 p.

*Myre, P.L. 1988. Dissolved aluminum in the Gulf of Mexico. EOS Transactions, American Geophysical Union, Vol. 69, p. 1127-1128.