## SELECTED REFERENCES

- Alexander, R.B., and Smith, R.A., 1990, County-level estimates of nitrogen and phosphorus fertilizer use in the United States, 1945 to 1985: U.S. Geological Survey Open-File Report 90-130, 12 p.
- Anderson, J.R., Hardy, E.E., Roach, J.T., and Witmer, R.E., 1976, A land use and land cover classification system for use with remote sensing data: U.S. Geological Survey Professional Paper 964, 28 p.
- Anthony, S.S., 1969, Algae handled efficiently in Augusta Water District: Water and Sewage Works, v. 116, p. 185-189.
- Ayotte, J.D., and Robinson, K.W., 1997, New England Coastal Basins, National Water-Quality Assessment program: U.S. Geological Survey Water Fact Sheet FS-060-97, 4 p.
- Barksdale, H.C., O'Bryan, D., and Schneider, W.J., 1966, Effect of drought on water resources in the Northeast: U.S. Geological Survey Hydrologic Investigations Atlas HA-243.
- Barlow, P.M., 1997, Dynamic models for conjunctive management of stream-aquifer systems of the glaciated northeast: University of Connecticut, Storrs, Conn., published Master's thesis, 256 p.
- Baxter, R.M., 1977, Environmental effects of dams and impoundments: Annual Review of Ecological Systems, v. 8, p. 255-283.
- Beattie, Thompson, and Levine, 1983, Working with your woodland: Hanover, N.H., University Press of New England, 310 p.
- Bell, R.W., 1993, Rhode Island stream water quality, *in* Paulson, R.W., Chase, E.B., Williams, J.S., and Moody, D.W., compilers, National water summary 1990-91—hydrologic events and stream water quality: U.S. Geological Survey Water-Supply Paper 2400, p. 477-484.
- Benson, M.A., 1962, Factors influencing the occurrence of floods in a humid region of diverse terrain: U.S. Geological Survey Water-Supply Paper 1580-B. 64 p., 1 pl.
- Bent, G.C., 1995, Streamflow, ground water recharge and discharge, and characteristics of surficial deposits in Buzzards Bay basin, southeastern Massachusetts: U.S. Geological Survey Water-Resources Investigations Report 95-4234, 56 p.
- Bloom, A.L., 1960, Late Pleistocene changes of sea level in south-western Maine: Augusta, Maine, Maine Geological Survey, 143 p.
- Bormann, F.H., and Likens, G.E., 1979, Pattern and process in a forested ecosystem: New York, Springer-Verlag, 253 p.

Borns, H.W., Jr., 1989, Changing perspectives of the Quaternary surficial geology of Maine, *in*  Marvinney, R.G., and Tucker, R.D., eds., Studies in Maine Geology: Maine Geological Survey, v. 6, Quaternary Geology, p. 1-12.

- Boudette, E.L., 1990, The geology of New Hampshire: Rocks and Minerals, v. 65, p. 306-312.
- Boudette, E.L., Canney, F.C., Cotton, J.E., Davis, R.I.,
  Ficklin, W.H., and Motooka, J.M., 1985, High levels of arsenic in the groundwaters of southeastern New
  Hampshire—a geochemical reconnaissance: U.S.
  Geological Survey Open-File Report 85-202, 19 p.
- Bratton, Lisa, 1991, Public water supply in Massachusetts, 1986: U.S. Geological Survey Open-File Report 91-86, 108 p.
- Cain, J.A., and Hamidzada, N.A., 1993, Rhode Island sand and gravel resources: Boston, Mass., New England Governor's Conference, Inc., 15 p., 1 pl., 1:250,000 scale.
- Cowing, D.J., and McNelly, J.L., 1978, Drainage areas of surface-water bodies of the Royal and Presumpscot River Basins in southwestern Maine: U.S. Geological Survey Open-File Report 78-566A, 23 p.
- Cullen, J.B., and Leak, William, 1988, New Hampshire's timber resource-past, present, future: New Hampshire Department of Resources and Economic Development, Division of Forests and Lands, 29 p.
- Dickerman, D.C., and Bell, R.W., 1993, Hydrogeology, water quality, and ground-water development alternatives in the upper Wood River ground-water reservoir, Rhode Island: U.S. Geological Survey Water-Resources Investigations Report 92-4119, 87 p.
- Dickerman, D.C., and Ozbilgin, M.M., 1985, Hydrogeology, water quality, and ground-water development alternatives the Beaver-Pasquiset ground water reservoir, Rhode Island: U.S. Geological Survey Water-Resources Investigations Report 85-4190, 104 p.
- Dickerman, D.C., Trench, E.C.T., and Russell, J.P., 1990, Hydrogeology, water quality, and ground-water development alternatives in the lower Wood River ground-water reservoir, Rhode Island: U.S. Geological Survey Water-Resources Investigations Report 89-4031, 109 p.
- Dickson, D.R., and McAfee, C.L., 1988a, Forest statistics for Massachusetts—1972 and 1985: U.S. Department of Agriculture, Forest Service, Resource Bulletin NE-106, 111 p.
- Domenico, P.A., and Schwartz, F.W., 1990, Physical and chemical hydrogeology: New York, John Wiley & Sons, Inc., 824 p.

Dreisig, J.J., and Dupee, B.S., 1994, Mercury in fish from New Hampshire inland waters—addendum report: New Hampshire Department of Public Health Services, DPHS Publication #94-018, 18 p.

Fenneman, N.M., 1938, Physiography of eastern United States: New York, McGraw-Hill Book Co., Inc., 714 p., 7 pls.

Fontaine, R.A., 1979, Drainage areas of surface-water bodies of the Androscoggin River Basin in southwestern Maine: U.S. Geological Survey Open-File Report 78-556C, 4 p.

——1980, Drainage areas of surface-water bodies of the Kennebec River Basin in southwestern Maine: U.S. Geological Survey Open-File Report 78-556F, 92 p.

Fontaine, R.A., and Nielsen, J.P., 1994, Flood of April 1987 in Maine: U.S. Geological Survey Water-Supply Paper 2424, 50 p.

Frieswyk, T.S., and Malley, A.M., 1985, Forest Statistics for New Hampshire—1973 and 1983: U.S. Department of Agriculture, Forest Service, Resource Bulletin NE-88, 100 p.

Frimpter, M.H., 1988, Massachusetts ground-water quality, *in* Moody, D.W., Carr, Jerry, Chase, E.B., and Paulson, R.W., compilers, National water summary 1986—hydrologic events and ground-water quality: U.S. Geological Survey Water-Supply Paper 2325, p. 297-304.

Frimpter, M.H., and Gay, F.B., 1979, Chemical quality of ground water on Cape Cod, Massachusetts:U.S. Geological Survey Water-Resources Investigations Report, 79-65, 11 p., 2 pls.

Gadoury, R.A., Socolow, R.S., Girouard, G.G., and Ramsbey, L.R., 1994, Water Resources Data Massachusetts and Rhode Island, Water Year 1993: U.S. Geological Survey Water-Data Report MA-RI-93-1, 266 p.

Gay, F.B., and Delaney, D.F., 1980, Hydrogeology and water resources of the Lower Merrimack River Basin, Massachusetts, from Concord River, Lowell, to Plum Island, Newburyport: U.S. Geological Survey Hydrologic Investigations Atlas HA-616, 4 sheets.

Goldsmith, Richard, 1991a, Stratigraphy of the Milford-Dedham Zone, Eastern Massachusetts—An Avolonian Terrane, *in* Hatch, N.L. (ed.), 1991, The Bedrock Geology of Massachusetts: U.S. Geological Survey Professional Paper 1366-E-J., 6 chap.

—1991b, Stratigraphy of the Nashoba Zone, Eastern Massachusetts—An Enigmatic Terrane, *in* Hatch, N.L., ed., 1991, The Bedrock Geology of Massachusetts: U.S. Geological Survey Professional Paper 1366-E-J., 6 chap.

Goldthwait, J.W., Goldthwait, L., and Goldthwait, R.P., 1951, The Geology of New Hampshire, part I, surficial geology: Concord, N.H., New Hampshire Department of Resources and Economic Development, 85 p.

Griffith, G.E., and Omernik, J.M., 1988, Total alkalinity of surface waters Northeastern region: U.S. Environmental Protection Agency, Environmental Research Laboratory, Corvallis, Oreg., 1 map.

Griffith, G.E., Omernik, J.M., Pierson, S.M., and Kiilsgaard, C.W., 1994, Massachusetts ecological regions project: Corvallis, Oreg., U.S. Environmental Protection Agency, Environmental Research Laboratory, for the Massachusetts Department of Environmental Protection, Commonwealth of Massachusetts Publication no. 17587-74-70-6/94-DEP, 56 p.

Hall, F.R., 1975, Chloride in natural waters of New Hampshire: New Hampshire Agricultural Experiment Station Bulletin 504, 25 p.

Hall, F.R., Donahue, P.M., and Eldridge, A.L., 1985, Radon gas in ground water of New Hampshire, *in* Annual Eastern Regional Ground Water Conference, 2nd, Portland, Maine, 1985, Proceedings: Worthington, Ohio, National Water Well Association, p. 86-101.

Hammond, R.E., 1991, New Hampshire floods and droughts, *in* Paulson, R.W., and others, compilers, National water summary 1988-89—hydrologic events and floods and droughts: U.S. Geological Survey Water-Supply Paper 2375, p. 393-400.

Hansen, B.P., and Lapham, W.W., 1992, Geohydrology and simulated ground water flow, Plymouth-Carver Aquifer, southeastern Massachusetts: U.S. Geological Survey Water-Resources Investigations Report 90-4204, 69 p., 2 pls.

Hansen, B.P., and Simcox, A.C., 1994, Yields of bedrock wells in Massachusetts: U.S. Geological Survey Water-Resources Investigations Report 93-4115, 43 p.

Harte, P.T., 1992, Regional ground-water flow in crystalline bedrock and interaction with glacial drift in the New England Uplands: Durham, N.H., University of New Hampshire, published Masters thesis, 147 p.

Harte, P.T., and Johnson, William, 1995, Geohydrology and water quality of stratified-drift aquifers in the Contoocook River Basin, south-central New Hampshire: U.S. Geological Survey Water-Resources Investigations Report 92-4154, 71 p., 4 pls.

Harte, P.T., and Mack, T.J., 1992, Geohydrology of, and simulation of ground-water flow in, the Milford-Souhegan glacial-drift aquifer, Milford, New Hampshire: U.S. Geological Survey Water-Resources Investigations Report 91-4177, 75 p.

Harte, P.T., and Winter, T.C., 1995, Simulations of flow in crystalline rock and recharge from overlying glacial deposits in a hypothetical New England setting: Groundwater, v. 33, no. 6, p. 953-964.

58 Water-Quality Assessment of the New England Coastal Basins in Maine, Massachusetts, New Hampshire, and Rhode Island: Environmental Settings and Implications for Water Quality and Aquatic Biota —1996, Factors affecting recharge to crystalline rock in the Mirror Lake area, Grafton County, New Hampshire, *in* Morganwalp, D.W., and Aronson, D.A., eds., U.S. Geological Survey Toxic Substances Hydrology Program, Proceedings of the technical meeting, Colorado Springs, Colo., September 20-24, 1993: U.S. Geological Survey Water-Resources Investigations Report 94-4015, v. 1, p. 141-150.

- Heath, R.C., 1983, Basic ground-water hydrology: U.S. Geological Survey Water-Supply Paper 2220, 84 p.
- Hem, J.D., 1985, Study and interpretation of the chemical characteristics of natural water (3d ed.): U.S. Geological Survey Water-Supply Paper 2254, 263 p.
- Hendrey, G.R., Galloway, J.N., Norton, S.A., Schofield, C.L., Shaffer, P.W., and Burns, D.A., 1980, Geological and hydrochemical sensitivity of the eastern United States to acid precipitation: Upton, N.Y., Brookhaven National Laboratory, Department of Energy and Environment, 90 p.
- Hermes, O.D., Gromet, L.P., and Murray, D.P. (compilers), 1994, Bedrock geologic map of Rhode Island: Kingston, R.I., University of Rhode Island, Rhode Island Map Series No. 1, scale 1:100,000.
- Hess, C.T., Norton, S.A., Brutseart, W.F., Casparius, R.E., Coombs, E.G., and Hess, A.L., 1979, Radon-222 in potable water supplies in Maine—the geology, hydrology, physics and health effects: Orono, University of Maine, Land and Water Resources Center, 119 p.
- Hirsch, R.M., Alley, W.M., and Wilber, W.G., 1988, Concepts for a National Water-Quality Assessment program: U.S. Geological Survey Circular 1021, 42 p.
- Hitt, K.J., 1994, Refining 1970's land-use data with 1990 population data to indicate new residential development: U.S. Geological Survey Water-Resources Investigations Report 94-4250, 15 p.
- Hsieh, P.A., Shapiro, A.M.K., Barton, C.C., Haeni, F.P., Johnson, C.D., Martin, C.W., Paillet, F.L., Winter, T.C., and Wright, D.L., 1993, Methods of characterizing fluid movement and chemical transport in fractured rocks, *in* Chaney, J.T., and Hepburh, J.C., eds., Field trip guidebook for the northeastern United States—1993, Boston, Mass., Geological Society of America: Amherst, University of Massachusetts, Department of Geology and Geography, contribution no. 67, p. R1-R30.
- Jaworski, N.A., Howarth, R.W., and Hetling, L.J., 1997, Atmospheric deposition of nitrogen oxides onto the landscape contributes to coastal eutrophication in the Northeast United States, Environmental Science and Technology, v. 31, p. 1995-2004.
- Johnson, R.H., 1988, Factors affecting ground-water quality, *in* Moody, D.W., Carr, Jerry, Chase, E.B., and Paulson, R.W., compilers, National water summary

1986—hydrologic events and ground-water quality: U.S. Geological Survey Water-Supply Paper 2325, p. 71-86.

- Johnston, H.E., 1985, Rhode Island ground-water resources, in National water summary 1984—hydrologic events, selected water-quality trends, and ground-water resources: U.S. Geological Water-Supply Paper 2275, p. 373-378.
- Johnston, H.E., and Barlow, P.M., 1988, Rhode Island ground-water quality, *in* Moody, D.W., Carr, Jerry, Chase, E.B., and Paulson, R.W., compilers, National water summary 1986—hydrologic events and groundwater quality: U.S. Geological Survey Water-Supply Paper 2325, p. 443-448.
- Kaye, C.A., 1960, Surficial geology of the Kingston Quadrangle, Rhode Island, *in* Contributions to general geology: U.S. Geological Survey Bulletin 1071-I, p. 341-394, 3 pls., 24,000 scale.
- Kimball, W.A., 1986, Stream temperature modeling for water-quality management: Boston, Mass., Northeastern University, Department of Civil Engineering, published Master's thesis, 68 p.
- King, P.B., and Beikman, H.M. (compilers), 1974, Geologic map of the United States: U.S. Geological Survey, map, 3 sheets.
- Knott, J.F., and Olimpio, J.C., 1986, Estimation of recharge rates to the sand and gravel aquifer using environmental tritium, Nantucket Island, Massachusetts: U.S. Geological Survey Water-Supply Paper 2297, 26 p.
- Knox, C.E., and Nordenson, T.J., 1955, Average annual runoff and precipitation in the New England-New York Area: U.S. Geological Survey Hydrologic Investigations Atlas HA 7, 6 sheets.
- Koteff, Carl, 1982, Deglacial history of Glacial Lake Nashua, East-Central Massachusetts, *in* Larson, G.J., and Stone, B.D., eds., Late Wisconsinan glaciation of New England, proceedings of a symposium on Late Wisconsinan glaciation of New England: Dubuque, Iowa, Kendall/Hunt Publishing, p. 129-144.
- Koteff, Carl, Stone, B.D., and Caldwell, D.W., 1984, Deglaciation of the Merrimack River Valley, Southern New Hampshire, *in* Hanson, L.S., ed., Geology of the Coastal Lowlands, Boston to Kennebunk, Maine: New England Intercollegiate Geologic Conference, 76th Annual Meeting, Danvers, Mass., [October 1984], p. 381-393.
- Koteff, Carl, and Pessl, Fred, Jr., 1981, Systematic ice retreat in New England: U.S. Geological Survey Professional Paper 1179, 20 p.

Krug, W.R., Gebert, W.A., Graczyk, D.J., Stevens Jr., D.L., Rochelle, B.P., and Church, M.R., 1990, Map of mean annual runoff for the northeastern, southeastern, and mid-Atlantic United States, water years 1951-80: U.S. Geological Survey Water-Resources Investigations Report 88-4094, 11 p., 1 pl.

Kullerot, L.K., 1989, Merrimack River Basin—A waterquality management plan: Concord, N.H., New Hampshire Department of Environmental Services, Water Supply and Pollution Control Division, chapters numbered separately.

Lanctot, E.M., 1985, Radon in the domestic environment and its relationship to cancer—an epidemiological study: Maine Geological Survey Open-File Report 85-88, 39 p.

Larson, G.J., 1982, Nonsynchronous retreat of ice lobes from southeastern Massachusetts, *in* Larson, G.J., and Stone, B.D., eds., Late Wisconsinan Glaciation of New England: Dubreque, Iowa, Kenndall-Hunt, p. 101-114.

Leahy, P.P., Rosenshein, J.S., and Knopman, D.S., 1990, Implementation plan for the National Water-Quality Assessment program: U.S. Geological Survey Open-File Report 90-174, 10 p.

Leahy, P.P., and Wilbur, W.G., 1991, National Water-Quality Assessment program: U.S. Geological Survey Water Fact Sheet, Open-File Report 91-54, 2 p.

LeBlanc, D.R., Guswa, J.H., Frimpter, M.H., and Lundquist, C.J., 1986, Ground-water resources of Cape Cod, Massachusetts: U.S. Geological Survey Hydrologic Investigations Atlas 692, 4 sheets.

Likens, G.E., ed., 1985, An ecosystem approach to aquatic ecology, Mirror Lake and its environment, New York, Springer-Verlag, 516 p.

Likens, G.E., and Bormann, F.H., 1995, Biogeochemistry of a forested ecosystem (2nd ed.): New York, Springer-Verlag, 159 p.

Likens, G.E., Eaton, J.S., Johnson, N.M., and Pierce, R.S., 1985, Flux and balance of water and chemicals, *in* Likens, G.E., ed., An ecosystem approach to aquatic ecology—Mirror Lake and its environment: New York, Springer-Verlag, p. 135-155.

Loiselle, M.C., and Evans, David, 1995, Fracture density, distribution, and well yields in coastal Maine: Groundwater, v. 33, no. 2, p. 190-196.

Lyford, F.P., Dysart, J.E., Randall, A.D., and Kontis, A.L., 1984, Glacial aquifer systems in the Northeastern United States—a study plan: U.S. Geological Survey Open-File Report 83-928, 33 p.

Lyons, J.B., Bothner, W.A., Moench, R.H., and Thompson, J.B., Jr., eds., 1997, Bedrock geologic map of New Hampshire: U.S. Geological Survey, 2 map sheets, scale 1:250,000.

Mack, T.J., and Lawlor, S.M., 1992, Geohydrology and water quality of stratified-drift aquifers in the Bellamy, Cocheco, and Salmon Falls River Basins, southeastern New Hampshire: U.S. Geological Survey Water-Resources Investigations Report 90-4161, 65 p., 6 pls.

Maine Department of Environmental Protection, 1994, State of Maine 1994 water-quality assessment: Augusta, Maine, Bureau of Land and Water, 129 p.

Maine Department of Inland Fisheries and Wildlife, 1982, Inland fisheries river management plan, *in* Maine State Planning Office, State of Maine Comprehensive Rivers Management Plan: Augusta, Maine, v. 4, December 1992, [variously paged].

Major, A.R., and Carr, K.C., 1991, Contaminant concentrations in Merrimack River fish: Concord, N.H., U.S. Fish and Wildlife Service, Report Number RY91-NEFO-1-EC, 21 p.

Maloney, T.J., 1988, Maine ground-water quality, *in* Moody, D.W., Carr, Jerry, Chase, E.B., and Paulson, R.W., compilers, National water summary 1986—hydrologic events and ground-water quality: U.S. Geological Survey Water-Supply Paper 2325, p. 279-286.

Maloney, T.M., and Bartlett, W.J., Jr., 1991, Maine floods and droughts, *in* Paulson, R.W. and others, compilers, National Water Summary 1988-89—Hydrologic events and floods and droughts: U.S. Geological Survey Water-Supply Paper 2375, p. 311-318.

Martin, S.M., 1997, Freshwater mussels (Bivalvia: Unionidae) of Maine: Northeastern Naturalist 4(1), p. 1-34.

Marvinney, R.G., Loiselle, M.C., Hopeck, J.T., Braley, David, and Krueger, J.A., 1994, Arsenic in Maine groundwater—an example from Buxton, Maine, *in* Proceedings of the 1994 conference on eastern regional ground water issues: National Ground Water Association, p. 701-715.

Marvinney, R.G., and Thompson, W.B., in press, The geology of Maine: Mineralogy of Maine, v. 2, p.

Marvinney, R.G., and Walters, D.H., 1993, Sand and gravel resources of Maine: Boston, Mass., New England Governors' Conference, Inc., 2 pls., scale 1:250,000.

Massachusetts Department of Environmental Protection, 1995a, Commonwealth of Massachusetts summary of water quality, 1995: North Grafton, Mass., Division of Water Pollution Control, 97 p.

——1995b, Massachusetts surface-water-quality standards: Boston, Mass., Office of Watershed Management, 160 p.

Massachusetts Department of Public Health, 1996, Freshwater fish consumption advisory list: Massachusetts Department of Public Health, Bureau of Environmental Health Assessment, 2 p.

Mattson, M.D., and Godfrey, P.J., 1994, Identification of road salt contamination using multiple regression and GIS: Environmental Management, v. 18, p. 767-773.

60 Water-Quality Assessment of the New England Coastal Basins in Maine, Massachusetts, New Hampshire, and Rhode Island: Environmental Settings and Implications for Water Quality and Aquatic Biota McMahon, J.S., 1990, The biophysical regions of Maine—patterns in the landscape and vegetation: Orono, Maine, University of Maine, published Master's thesis, 120 p. [Map located at URL: http://www.state.me.us/doc/nrimc/mnap/species/bioim g.htm]

- Meade, R.H., 1982, Sources, sinks, and storage of river sediment in the Atlantic drainage of the United States: The Journal of Geology, v. 90, p. 235-252.
- Medalie, Laura, 1996, Wastewater collection and return flow in New England, 1990: U.S. Geological Survey Water-Resources Investigations Report 95-4144, 79 p.
  ——1997, Estimated water withdrawals and use in New

Hampshire, 1995: U.S. Geological Survey Water-Resources Investigations Report 97-4177, 13 p.

Medalie, Laura, and Moore, R.B., 1995, Ground-water resources in New Hampshire—stratified-drift aquifers: U.S. Geological Survey Water-Resources Investigations Report 95-4100, 31 p.

Melvin, R.L., de Lima, Virginia, and Stone, B.D., 1992, The stratigraphy and hydraulic properties of tills in southern New England: U.S. Geological Survey Open-File Report 91-481, 53 p.

Mills, H.F., 1987, Filter of the water supply of the city of Lawrence, and its results: Journal of the New England Water Works Association, v. 101, p. 258-279.

Moore, R.B., Johnson, C.D., and Douglas, E.M., 1994, Geohydrology and water quality of stratified-drift aquifers in the Lower Connecticut River Basin, southwestern New Hampshire: U.S. Geological Survey Water-Resources Investigations Report 92-4013, 68 p., 4 pls.

Moore, R.B., and Medalie, Laura, 1995, Geohydrology and water quality of stratified-drift aquifers in the Saco and Ossipee River Basins, west-central New Hampshire: U.S. Geological Survey Water-Resources Investigations Report 94-4182, p., 2 pls.

Morrissey, D.J., 1983, Hydrology of the Little Androscoggin River Valley aquifer, Oxford County, Maine: U.S. Geological Survey Water-Resources Investigations Report 83-4018, 79 p., 8 pls.

1988, New Hampshire ground-water quality, *in* Moody, D.W., Carr, Jerry, Chase, E.B., and Paulson, R.W., compilers, National water summary 1986—hydrologic events and ground-water quality: U.S. Geological Survey Water-Supply Paper 2325, p. 363-368.

Morrissey, D.J., Randall, A.D., and Williams, J.H., 1988, Upland runoff as a major source of recharge to stratified-drift aquifers in the glaciated Northeast, *in* Randall, A.D., and Johnson, A.I., eds., Regional aquifer systems of the United States-the Northeast glacial aquifers: American Water Resources Association, Monograph Series no. 11, p. 17-36. Myette, C.F., and Simcox, A.C., 1992, Water resources and aquifer yields in the Charles River Basin, Massachusetts: U.S. Geological Survey Water-Resources Investigations Report 88-4173, 50 p.

Natural Resource and Conservation Service, 1994, State soil geographic (STATSGO) data base: U.S. Department of Agriculture, National Soil Survey Center, Miscellaneous publications number 1492, 33 p.

New England River Basins Commission, 1978, Merrimack River Basin overview: Boston, Mass., 116 p.

New Hampshire Department of Environmental Services, 1996, State of New Hampshire 1996 section 305(b) water quality report: Concord, N.H., NHDES-WD-96-8, [variously paged].

Nielsen, J.P., Higgins, W.B., and Lippert, R.G., 1994,Water Resources Data - Maine - Water Year 1993:U.S. Geological Survey Water-Data Report ME-93-1, 233 p.

O'Conner, T.P., and Beliaeff, Benoit, 1995, Recent trends in coastal environmental quality—results from the mussel watch project: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, 40 p.

Olcott, P.G., 1995, Ground-water atlas of the United States, Segment 12: U.S. Geological Survey Hydrologic Investigations Atlas 730-M, 28 p.

Olson, S.A., and Cowing, D.J., 1993, Maine stream water quality, *in* Paulson, R.W., Chase, E.B., Williams, J.S., and Moody, D.W., compilers, National water summary 1990-91—hydrologic events and stream water quality: U.S. Geological Survey Water-Supply Paper 2400, p. 301-308.

Omernik, J.M., 1987, Ecoregions of the conterminous United States: Annuals of the Association of American Geographers, v. 77(1), p. 118-125.

Omernik, J.M., and Kinney, A.J., 1985, Total alkalinity of surface waters—a map of the New England and New York region: Corvallis, Oreg., U.S. Environmental Protection Agency, EPA-600/D-84-216, 12 p.

Osberg, P.H., Hussey, A.M., and Boone, G.M., eds., 1985, Bedrock geologic map of Maine: Maine Geological Survey, Department of Conservation, 1 sheet, scale 1:500,000.

Pait, A.S., De Souza, A.E., and Farrow, D.R.G., 1992, Agricultural pesticide use in coastal areas—a national summary: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, 112 p.

Paulsen, C.G., Bigwood, B.L., Harrington, A.W., Hartwell, O.W., Kinnison, H.B., 1940, Hurricane floods of September 1938: U.S. Geological Survey Water-Supply Paper 867, 562 p., 2 pls.

Paulson, R.W., Chase, E.B., Williams, J.S., and Moody, D.W., 1993, National water summary 1990-91, U.S. Geological Survey Water-Supply Paper 2400, p. 590. Persky, J.H., 1986, The relation of ground-water quality to housing density, Cape Cod, Massachusetts: U.S. Geological Survey Water-Resources Investigations Report 86-4093, 28 p.

Rainwater, F.H., 1962, Stream composition of the conterminous United States: U.S. Geological Survey Hydrologic Investigations Atlas HA-61, 3 pls.

Raloff, J., 1997, Water link to frog deformities strengthened: Science News, 152(15), 230 p.

Randall, A.D., Francis, R.M., Frimpter, M.H., and Emery, J.M., 1988, Region 19, Northeastern Appalachians, *in* Back, W., Rosenshein, J.S., and Seaber, P.R., eds., Hydrogeology: Boulder, Colo., Geological Society of America, The Geology of North America, v. 0-2, 10 p.

Rhode Island Department of Environmental Management, 1994, The state of the State's waters - Rhode Island, A report to Congress: Providence, Department of Environmental Management, Division of Water Resources, variously paged.

Rourke, R.V., Ferwerda, J.A., and LaFlamme, K.J., 1978, The soils of Maine, Miscellaneous Report no. 203: Maine Life Sciences and Agriculture Experiment Station in cooperation with the U.S. Soil Conservation Service, University of Maine at Orono, Maine, 36 p.

Schafer, J.P., 1961, Surficial geology of the Narrangansett Pier Quadrangle, Rhode Island: U.S. Geological Survey Geologic Quadrangle Maps GW-140, 1 sheet, 24,000 scale.

Schmitt, C.J., and Brumbaugh, W.G., 1990, National contaminant biomonitoring program, concentrations of arsenic, cadmium, copper, lead, mercury, selenium, and zinc in United States freshwater fish, 1976-1984: Archives of Environmental Contamination and Toxicology, v. 19, p. 731-747.

Schmitt, C.J., Zajicek, J.L., and Peterman, P.H., 1990, National contaminant biomonitoring program, residues of organochlorine chemicals in United States freshwater fish, 1976-1984: Archives of Environmental Contamination and Toxicology, v. 19, p. 748-781.

Simcox, A.C., 1992, Water resources of Massachusetts: U.S. Geological Survey Water-Resources Investigations Report 90-4144, 94 p.

Smith, C.T., and McCormack, M.L., 1988, Watershed losses of triclopyr after aerial application to release sprucefir: Proceedings of the Northeastern Weed Science Society, v. 42, p. 104-108.

Smith, D.G., 1995, Keys to the freshwater macroinvertebrates of Massachusetts (2nd ed.): Sunderland, Mass., Department of Zoology, University of Massachusetts, 243 p. Smith, G.W., and Hunter, L.E., 1989, Late Wisconsin deglaciation of Coastal Maine, *in* Marvinney, R.G., and Tucker, R.D., eds., Studies in Maine Geology: Maine Geological Survey, Quaternary Geology, v. 6, p. 13-32.

Spliethoff, H.M., and Hemond, H.F., 1996, History of toxic metal discharge to surface waters of the Aberjona watershed: Environmental Science and Technology, v., 30, p. 121-128.

Stafford, C.P., 1994, Mercury contamination in Maine predatory fishes: Augusta, University of Maine, published Masters thesis, 50 p.

Stekl, P.J., and Flanagan, S.M., 1992, Geohydrology and water quality of stratified-drift aquifers in the Lower Merrimack and coastal river basins, southeastern New Hampshire: U.S. Geological Survey Water-Resources Investigations Report 90-4025, 75 p., 6 pls.

Stone, B.D., and Beinikis, A.I., 1993, Sand and gravel resources of Massachusetts: Boston, Mass., New England Governors' Conference, Inc., 3 pls., scale 1:250,000.

Stone, B.D., and Borns, H.W., Jr., 1986, Pleistocene glacial and interglacial stratigraphy of New England, Long Island, and adjacent Georges Banks and Gulf of Maine, *in* Sibrava, V., Bowen, D.Q., and Richmond, G.M., eds., Quaternary Glaciations in the Northern Hemisphere: Pergamon Press, New York., p. 39-52.

Strause, J.L., 1993, Massachusetts stream water quality, *in* Paulson, R.W., Chase, E.B., Williams, J.S., and Moody, D.W., compilers, National water summary 1990-91—hydrologic events and stream water quality: U.S. Geological Survey Water-Supply Paper 2400, p. 317-324.

Technical Committee for Anadromous Fish Restoration in the Merrimack River, 1990, Strategic plan for the restoration of Atlantic Salmon to the Merrimack River, 1990 through 2004: Merrimack River Policy and Technical Committees, U.S. Fish and Wildlife Service, Nashua, N.H., p. 62.

Tepper, D.H., Morrissey, D.J., Johnson, C.D., and Maloney, T.J., 1990, Hydrogeology, water quality, and effects of increased municipal pumpage of the Saco River valley glacial aquifer, Bartlett, New Hampshire to Fryeburg, Maine: U.S. Geological Survey Water-Resources Investigations Report 88-4179, 113 p., 6 pl.

Thompson, W.B., and Borns, H.W., Jr., eds., 1985, Surficial geologic map of Maine: Maine Geological Survey, Department of Conservation, 1 pl., 1:500,000 scale.

Thompson, W.B., and Fowler, B.K., 1989, Deglaciation of the Upper Androscoggin River Valley and Northeastern White Mountains, Maine and New Hampshire, *in* Marvinney, R.G., and Tucker, R.D., eds., Studies in Maine Geology: Maine Geological Survey, Quaternary Geology, v. 6, p. 71-88.

62 Water-Quality Assessment of the New England Coastal Basins in Maine, Massachusetts, New Hampshire, and Rhode Island: Environmental Settings and Implications for Water Quality and Aquatic Biota Tiedeman, C.R., Goode, D.J., and Hsieh, P.A., 1997, Numerical simulation of ground-water flow through glacial deposits and crystalline bedrock in the Mirror Lake area, Grafton County, New Hampshire: U.S. Geological Survey Professional Paper 1572, 50 p.

Toppin, K.W., 1993, New Hampshire stream-water quality, in Paulson, R.W., Chase, E.B., Williams, J.S., and Moody, D.W., compilers, National water summary 1990-91—hydrologic events and stream water quality: U.S. Geological Survey Water-Supply Paper 2400, p. 387-394.

Trench, E.C.T., 1991, Ground-water resources of Rhode Island: U.S. Geological Survey Open-File Report 93-464, 169 p.

Trombley, T.J., 1992, Quality of water from public-supply wells in Massachusetts, 1975-86: U.S. Geological Survey Water-Resources Investigation Report 91-4129. 63 p.

U.S. Army Corps of Engineers, 1989, Water resources study, Androscoggin River Basin, Maine—Reconnaissance Report: Waltham, Mass., U.S. Army Corps of Engineers, New England Division, 80 p.

——1990, Kennebec River Basin Study, Kennebec River Basin, Maine: Waltham, Mass., U.S. Army Corps of Engineers, New England Division, 74 p.

——1996, Water control infrastructure, national inventory of dams, 1995-96: U.S. Federal Emergency Management Agency, 1 cd-rom.

- U.S. Atlantic Salmon Assessment Committee, 1994, Annual report of the U.S. Atlantic salmon assessment committee—report no. 6 - 1993 activities: Nashua, N.H., U.S. Section to the North Atlantic Salmon Conservation Organization, U.S. Fish and Wildlife Service, 107 p.
- U.S. Department of Commerce, 1977, Climate of New Hampshire: National Oceanic and Atmospheric Administration Climatography of the United States no. 60, 15 p.

——1982a, Climate of Maine: National Oceanic and Atmospheric Administration Climatography of the United States no. 60, 15 p.

——1994b, 1992 Census of agriculture: volume 1 geographic area series, part 21, Massachusetts state and county data report AC92-A-21, 226 p.

U.S. Environmental Protection Agency, 1992, Nation study of chemical residues in fish (vols. I and II): Office of Science and Technology, Standards and Applied Science Division, EPA 823-R-92-0008a and b, 166 p., appendices.

U.S. Fish and Wildlife Service, 1987, Saco River strategic plan for fisheries management: Laconia, N.H., [variously paged].

 ——1991a, Final environmental assessment—Proposal to protect wildlife habitat, Lake Umbagog, Coos County, New Hampshire, Oxford County, Maine: Newton Corner, Mass., U.S. Fish and Wildlife Service, Region 5, 49 p.

 ——1990, Endangered and threatened wildlife and plants determination of endangered status for the dwarf Wedge Mussel: Federal Register, 5550-9447-9450.

 ——1991b, Final Environmental Assessment, Proposal to protect wildlife habitat, Lake Umbagog, Coos County, New Hampshire and Oxford, County, Maine: Newton Corner, Mass., U.S. Fish and Wildlife Service, Region 5, 49 p.

U.S. Forest Service and Governors' Task Force on Northern Forest Lands, 1990, Northern Forests Lands Study: U.S. Department of Agriculture, Forest Service, 206 p.

- U.S. Geological Survey, 1990, Land use and land cover digital data from 1:250,000- and 1:100,000-scale maps: U.S. Geological Survey Geodata Users Guide 4, 33 p.
- U.S. Soil Conservation Service, 1968, Soil survey laboratory data and descriptions for some soils of New England: U.S. Department of Agriculture, Soil Conservation Service, Soil Survey Investigations Report no. 20, 295 p.

Veeger, A.I., and Johnston, H.E., 1996, Hydrogeology and water resources of Block Island, Rhode Island, with a section on Geology, by Stone, B.D., and Sirkin, L.A.: U.S. Geological Survey Water-Resources Investigations Report 94-4096, 68 p.

Walker, P.N., and Lautzenheiser, Robert, 1991, Rhode Island floods and droughts, *in* Paulson, R.W. and others, compilers, National water summary 1988-89—hydrologic events and floods and droughts: U.S. Geological Survey Water-Supply Paper 2375, p. 483-488.

Wandle, S.W., Jr., 1991, Massachusetts floods and droughts, in Paulson, R.W., and others, compilers, National water summary 1988-89—Hydrologic events and floods and droughts: U.S. Geological Survey Water-Supply Paper 2375, p. 327-334.

- Wandle, W.S., and Randall, A.D., 1994, Effects of surficial geology, lakes and swamps, and annual water availability on low flows of streams in central New England, and their use in low-flow estimation:
  U.S. Geological Survey Water-Resources Investigations Report 93-4092, 57 p.
- Weddle, T.K., Koteff, Carl, Thompson, W.B., Retelle, M.J., and Marvinney, C.L., 1993, The late-glacial marine invasion of coastal-central New England (northeastern Massachusetts-southwestern Maine)— Its ups and downs, in Chaney, J.T., and Hepburn, J.C., eds., Geological Society of America, Annual Meeting, Boston, Mass., October 25-28, 1993, Field trip guidebook for Northeastern United States: Amherst, University of Massachusetts, Department of Geology and Geography, v. 2, contribution no. 67, p. 11-I31.
- Williams, J.S., Tepper, D.H., Tolman, A.L., Thompson,
  W.B., 1987, Hydrogeology and water quality of significant sand and gravel aquifers in parts of
  Androscoggin, Cumberland, Oxford, and York
  Counties, Maine—Significant sand and gravel aquifer
  maps 12, 13, 14, and 15: Augusta, Maine, Maine
  Department of Conservation, Maine Geological Survey
  Open-File no. 87-1a.
- Zapecza, O.S., and Szabo, Zoltan, 1988, Natural radioactivity in groundwater—a review, *in* Paulson, R.W. and others, compilers, National water summary 1988-89—hydrologic events and floods and droughts: U.S. Geological Survey Water-Supply Paper 2375, p. 50-57.
- Zen, E-an, Goldsmith, Richard, Ratcliff, N.L., Robinson, Peter, and Stanley, R.S., [compilers], 1983, Bedrock geologic map of Massachusetts: U.S. Geological Survey, 3 map sheets, scale 1:250,000.