**Food Supply**

Temporary loss of the benthic infaunal food supply for many finfish and crustaceans could occur through siltation and the subsequent mortality of the infauna. Mortality occurs due to increased turbidity smothering potential prey items, or simply the physical displacement of food organisms where the pipeline is installed. Construction of the pipeline may also conceivably result in the physical destruction of the physical habitat or structure; however, it would appear that pipeline construction would have as much chance of creating new structures as it would have of destroying existing structures. In fact, Brosius et al. (1983) reported that fish may actually be attracted to recently trenched areas.

Brosius et al. (1983) concluded in their evaluation of pipeline construction that any impacts on adult finfish and their habitats would be minimal. Furthermore, the disturbance caused by trenching is expected to be short-term, and suspended sediments should settle rather quickly upon final installation of the pipeline. There would be some displacement of benthic organisms, which serve as food items for many fish species, however, impacts to fisheries are expected to be minimal. This impact should be temporary, since most organisms are expected to quickly recolonize disturbed areas.

**Spawning and Nursery Areas**

Potential impacts to spawning and nursery areas include direct impacts to fish eggs and larvae that only have limited mobility and are therefore, at their most vulnerable stage, and impacts to spawning and nursery habitats. Re-deposition of suspended sediments can bury demersal eggs and larvae. Suspended particulates have been shown to reduce development and survival of mollusk larvae, and Brosius et at. ( 1983) postulated that the same could hold true for planktonic finfish and crustacean larvae. The re-suspended sediments may also interfere with the feeding of planktonic larvae of many species, however, it is expected that sediments would settle quickly, and any disturbance to feeding patterns of larval species are expected to be short-term while sediments fall back to the seafloor.

Many of the commercially important finfish are estuarine dependent. The nursery areas for many of the estuarine fish are tidal marshes, seagrass beds, and tidal shallows. Judicious siting has resulted in the development of a project that avoids direct impacts to all of these resources. Iroquois would have no impact on tidal wetlands and therefore should have little or no impact on spawning and nursery habitats.

**Fishing-Gear Conflicts**

Construction of the pipeline would effectively remove the immediate area from fishing opportunities by physical occupation of the site, but this impact is expected to be temporary and minimal. Fish and crustaceans may relocate in an attempt to avoid construction disturbances; such relocation may effectively remove areas from fishing or decrease fishing success for some longer period of time. However, this effect is reversible as well.

The emplacement of structures (e.g., pipelines) can result in a loss of a portion of the total area available to commercial fishermen causing space-use conflicts. Underwater obstructions such as pipelines, can result in the loss or damage of gear (trawls, pots and traps) and catch, business downtime, and vessel damage (MMS 1997). However, the proposed pipeline is intended to be installed up to approximately 3 feet below the mudline as measured to top of pipe, and their locations made public knowledge. These methods should lessen the potential that gear or vessels of commercial fishermen would be damaged. The overall area of the pipeline, once installed, would not significantly take away from the total area accessible to commercial fisherman. Space-use conflicts would be negligible and little economic impact to commercial fisheries is expected.

### 5.3.4 Ocean Dumping Sites

No impacts on ocean dumping sites are anticipated. The disturbance caused by the ELI Project should not affect current dredged material disposal mounds located at any of these four sites. Due to the distance from the proposed pipeline, it is not expected that the normal operations of the dumping ground would be affected by construction activities.

### 5.3.5 Shellfish Franchise Areas

The shellfish lease area in Connecticut will be temporarily impacted as a result of the ELI Project and, may preclude the use of this area for shellfishing until the site conditions and shellfish communities are restored.

## 6.0 CONCLUSION

The sediments and benthic communities of coastal shelf areas are subjected to many forms of disturbance (Kaiser et al. 1998; Hall 1994) which vary in their extent (Kaiser et al. 1998). Large-scale natural disturbances, such as seasonal storms and strong tidal currents, form a background against which other smaller disturbances, such as those induced by predator feeding activities occur (Van Blaricom 1982; Oliver and Slattery 1985; Hall et al. 1993). Most studies have shown that small-scale disturbance events, even when frequent, are either masked by the background of large-scale disturbances, or that the scale of disturbance is small enough to allow rapid recolonization such that large-scale effects never become apparent (Kaiser et al. 1998, Hall et al. 1993). The effects of even large-scale disturbances such as storms may be within the bounds of annual variation in benthic community structure (Posey et al. 1996).

However, presumably there exists a threshold scale and frequency of disturbance events at which lasting ecological effects may occur, even against a background of natural disturbance (Kaiser et al. 1998). Physical disturbance of the seabed by bottom trawling fishing vessels may exceed this threshold, more so than any construction caused by a one-time pipeline placement. This disturbance can lead to long-term changes in benthic community structure particularly as it might generate species- or size-specific mortality with a profile that differs from natural disturbance (Kaiser et al. 1998). Bottom fishing is one of the most widespread sources of anthropogenic disturbance to seabed communities. Physical disturbance of the seabed by demersal fishing gear has been studied and found to be considerable in the North, Irish, and Celtic Seas, the English Channel, and off the coast of New England. Although Long Island Sound has not been studied as intensively as other areas, it is safe to assume that trawling frequency in Long Island Sound is similar, since the primary commercial fishing sources are ground fish such as winter and windowpane flounder and scup. Beam trawling, the most common method for fishing groundfish, may lead to long-term changes in benthic community structure. This is a repeated event and has the potential for a far greater impact on the benthic community than a one-time disturbance caused by the proposed ELI pipeline construction. Therefore, the placement of the ELI Pipeline will not have any long-term effects on the benthic communities associated with the pipeline route and far less impact than the trawling effects caused by vessels fishing Long Island Sound.

It is estimated that 1.4 x 109 kilograms (kg) of sediment are re-suspended with each daily tidal cycle in Long Island Sound and cumulatively 1 x 1012 kg are re-suspended annually. This cumulative rate is 1000 times greater than the long-term sedimentation rate calculated for Long Island Sound. These resuspension rates rival the inputs of new sediments to active deltas. Storm energy may also result in transient resuspension events that produce significant redistribution of sediment within Long Island Sound. For example, the passage of Hurricane Gloria directly over the CLIS Disposal Site in September

1985 resulted in the creation of a 5- to 6-cm thick layer of sand over muds just north of the northern edge of the CLIS boundary (O'Conner et al. 1989). The amount of material that would be temporarily re-suspended as a result of pipeline construction is a small fraction of the amount of material re-suspended in Long Island Sound on a daily basis.

## 7.0 REFERENCES


Able, K.W., K.L. Heck, M.P. Fahay, and C.T. Roman. 1988. Use of salt-marsh peat reefs by small juvenile lobsters on Cape Cod, Massachusetts. *Estuaries* 11:83–86.

Adams, D., J.S. O'Connor, and S.B. Weisberg. 1998. Final Report, Sediment Quality of the N.Y./N.J Harbor Systems: EPA Report EPA/902-R-98-001, 72 pp. and 9 appendices.

Allen, 1970. *Physical Processes of Sedimentation. Earth Science Series. Vol. 1.* J. Sutton and J.V Watson (eds.) American Elsivier Publishing Company. New York. 248 pp.

Aller, R.C. 1978. Experimental studies of changes produced by deposit feeders on pore water, sediment and overlying water chemistry. *American Journal of Science* 278:1185–1234.

Aller, R.C. 1980. Diagenetic processes near the sediment-water interface of Long Island Sound. I. Decomposition and nutrient element geochemistry (S, N, and P). pp. 237–350 In: *Estuarine Physics and Chemistry; Studies in Long Island Sound.* B. Saltzman (ed.) Advances in Geophysics, v. 22. Academic Press, N.Y. 424 pp.

Aller, R.C. 1982. The effects of macrobenthos on chemical properties of marine sediments and overlying waters. pp: 53–102 In: *Animal-Sediment Relations.* P.L. McCall & M.J.S. Tevesz (eds.), Plenum Publishing, NY.

Aller, R.C. 1994a. The sedimentary Mn cycle in Long Island Sound; its role as intermediate oxidant and the influence ofbioturbation, $O_2$, and $C_{org}$, flux on diagenetic reaction balances. *Journal of Marine Research* 52:259–295.

Aller, R.C. 1994b. Bioturbation and remineralization of sedimentary organic matter; effects of redox oscillation. *Chemical Geology* 114:331–345.

Aller, R.C., and J.Y. Yingst. 1978. Biogeochemistry of tube-dwellings: study of sedentary polychaete *Amphitrite ornata* (Leidy). *Journal of Marine Research* 36:201–254.

Altobello, Marilyn A. 1992. The Economic Importance of Long Island Sound's Water Quality Dependent Activities. Prepared for U.S. EPA, Region I, Boston.

Anderson, T.H., and G.T. Taylor, 2001. Nutrient pulses, plankton blooms, and seasonal hypoxia Western Long Island Sound. *Estuaries* 24:228–243.

Atema, J., S. Jacobson, E.B. Karnofsky, S. Oleszko-Szuts, and L. Stein. 1979. Pair formation in the lobster, *Homarus americanus*: Behavioral development, pheromones and mating. *Marine Behavior and Physiology* 6:277–296.

Atema, J., and R. Voigt. 1995. Chapter 13. Behavior and Sensory Biology. pp. 313–348 In: *Biology of the Lobster Homarus americanus.* J.R. Factor (ed.) Academic Press.

Barshaw, D.E. 1989. Growth and survival of post-larval lobsters, *Homarus americanus*, on a diet of plankton. *Fish Bulletin* 87:366–370.

Bass, A.J., P.C. Heemstra, and L.J.V Compagno. 1986. Carcharhinidae. pp. 67–87 In: *Smith's Sea Fishes* M.M. Smith and P.C. Heemstra (eds.). Springer-Verlag, Berlin.

Biernbaum, C. K. 1979. Influence of sedimentary factors on the distribution of benthic amphipods of Fisher Island Sound, Connecticut. *Journal of Experimental Biology and Ecology* 38: 201–223.

Bohlen, W.F. and J. M. Tramontano. 1974b. Oceanographic factors relating to the disposal of dredged material in Long Island Sound. 2. Physical and chemical characteristics of the waters adjacent to the New have dredge spoils disposal site. Data report 1973-1974. SR-22. June 1974. Marine Science Institute, Groton, CT.

Bohlen, W.F. and J.M. Tramontano. 1974a. Oceanographic factors relating to the disposal of dredged material in Long Island Sound: 1. Physical and chemical characteristics of the waters adjacent to the New Haven dredge spoils disposal site, Data Report 1972-1973. SR-21, February 1974. Marine Science Institute, Groton, CT.

Bokuniewicz, H.J. 1980. Sand transport at the floor of Long Island Sound. *Advances in Geophysics* 22:41–67.

Bokuniewicz, H. J., J.A. Gebert, and R.B. Gordon. 1976. Sediment mass balance of a large estuary, Long Island sound. Estuarine and Coastal Marine Science. 4: 235-241.

Bokuniewicz, H.J. and R.B. Gordon. 1980a. Sediment transport and deposition in Long Island Sound. In: *Estuarine Physics and Chemistry: Studies in Long Island Sound.* B. Saltzman (ed.) pp.69–128, Advances in Geophysics, v. 22, Academic Press, N.Y. 424 pp.

Bokuniewicz, H.J. and R.B. Gordon. 1980b. Storm and tidal energy in Long Island Sound. *Advances in Geophysics* 22:69–106.

Bokuniewicz, H.J. and R.B. Gordon. 1980c. Sediment transport and deposition in Long island Sound. *Advances in Geophysics*

Bowman, M.J. 1977. Nutrient distributions and transport in Long Island Sound. Estuarine and Coastal Marine Science. 5:531-548

Boswell, P.G.H., 1961. *Muddy Sediments*. Heffer, Cambridge, U.K.

Briggs, P.T., and F.M. Mushacke. 1979. The American lobster in western Long island Sound. *NewYork Fish and Game Journal* 26:59–86.

Briggs, P .T., and F .M. Mushacke. 1980. The American lobster and the pot fishery in the inshore waters off the south shore of Long Island, New York. *NewYork Fish and Game Journal* 27:156–178.

Briggs, P.T. and C.S. Zawacki. 1974. American Lobsters at artificial reefs in New York. *New York Fish and Game Journal* 21:73–77.

Brosius, J.E. , R. W .Talbot, and N.P. Psuty. 1983. Identification and assessment of impacts associated with the construction and operation of submarine pipelines on the Mid-Atlantic Outer Continental Shelf. U.S. Department of Interior Minerals Management Service. Mid-Atlantic OCS Region. PB84-197863. Vienna, Virginia. 160pp.

Buchholtz ten Brink. M.R. and E.L. Mecray. in press. Contaminant distribution and accumulation in sediments of Long Island Sound: Field work and initial results. USGS.

Carey. D.A. 1998. Long Island Sound dredged material management approach and appendices. SAIC report No. 442 submitted to the State of Connecticut Department of Environmental Protection. Office of Long Island Sound Programs, Dredged Sediment Management Study.

Carey. D.A. and D.C. Rhoads. 1998. Response of benthos to sedimentary disturbances in Long Island Sound: A twenty-five year record. Unpublished poster at the Organism-sediment interactions symposium/workshop. Belle Baruch Institute of Marine Science, Charleston. S.C.

Carr. A.F., Jr., 1986. New perspectives on the pelagic stage of sea turtle development. NOAA Tech. Memo. NMFS-SEFC-190. 36 pp.

Centaur Associates, Inc. 1984. Mitigation of seafloor conflicts between oil and gas pipelines and commercial trawl fisheries on the California outer continental shelf. United States Department of the Interior, Minerals Management Service, Pacific OCS Region, Contract No. 14-12-001-30050.

Cervigon, F. 1993. os peces marinos de Venezuela. Volume II. Fundacion Cientificia los Roques. Caracas, Venezuela. 500 pp.

Claro, R. 1994. Caracteristicas generales de la ictiofauna. pp.55–70 In: *Ecologia de los peces marinos de Cuba*. R. Claro (ed.) Instituto de Oceanologia Academia de Ciencias de Cuba and Centro de Investigaciones de Quintana Roo.

Cobb, J.S. 1971. The shelter related behavior of the lobster, *Homarus americanus*. *Ecology* 52:108–115.

Collette, B.B. 1997a. Rachycentridae. *Cobias*. In: FAO Identification Guide for Fishery Purposes. The Western Central Pacific. K.E. Carpenter and V. Niem (eds.)

Collette, B.B. 1997b. Pomatomidae. Bluefishes. In: FAO Identification Guide for Fishery Purposes. The Western Central Pacific. K.E. Carpenter and V. Niem (eds.)

Cooper, R.A. and J.R. Uzmann. 1971. Migrations and growth of deep-sea lobsters, *Homarus americanus*. *Science* 171:288–290.

Cooper, R.A. and J.R. Uzmann. 1977. Ecology ofjuvenile and adult clawed lobsters, Homarus americanus, Homarus gammarus, and Nephrops norvegicus. Div. Fish. Oceanogr. Circ. (Aust., C.S.I.R.O.)7:187–208.

Cooper, R.A., and J.R. Uzmann. 1980. Ecology of juvenile and adult Homarus . Pages 97-142 in J.S. Cobb and B.F. Phillips, eds. The biology and management of lobsters, Vol. II. Academic Press, New York.(Lower Water Street Fisheries Library)

Connecticut Department of Environmental Protection. 1997. A Study of Marine Recreational Fisheries in Connecticut (March 1, 1996 –February 28, 1997). CT DEP, Marine Fisheries Office. Old Lyme, CT. 169 pp.

Connecticut Department of Environmental Protection. 1998. A Study of Marine Recreational Fisheries in Connecticut (March 1. 1997– February 28, 1998). CT DEP, Marine Fisheries Office, Old Lyme, CT. 82 pp.

D' Agostino. A. 1980. Growth and color of juvenile lobsters (*Homarus americanus*) kept on diets of natural and artificial foodstuff. *Maine Sea Grant Publications Technical Report* 58:41–48.

Dames & Moore. 1981. Environmental impacts on open water disposal. Dames & Moore. 10 pp.

DAMOS. 1985. Western Long Island Sound Disposal Area. Summary of Program Results 1981–1984. Science Applications International Corporation (SAIC) report #SAIC-84/7521&C46. Morton. R.W., J.H. Parker, and W.H. Richmond (eds.). U.S. Army Corps of Engineers. New England Division, Waltham, MA.

Daniel, P.C., R.C. Bayer, and S. Chapman. 1985. Barnacle larvae *(Balanus* spp.) as a potential diet for juvenile lobsters (*Homarus americanus*). Aquaculture 46:67–70.

Day, J.W. Jr., C.A. Hall, W.M. Kemp, and A. Yanez-Arancibia. 1989. *Estuarine Ecology*. John Wiley and Sons, New York.

Davis, H.C. 1960. Effects of turbidity-producing materials in sea water on eggs and larva of the clam. *Biological Bulletin* 118 (1):48–54.

Davis, H.C. and H. Hidu. 1969. Effects of turbidity-producing substances in sea water on eggs and larvae of three genera of bivalve mollusks. *Veliger* 11(4): 316–323.

Deevey, G.B. 1956. Oceanography of Long Island Sound: zooplankton. *Bulletin of the Binghamton Oceanographic Collection* 15:113–155.

DeSylva, D.P. 1952. The transparency, by black and white Secchi disc, of the waters of Long Island Sound, Block Island Sound and Newport Bight. Cruise STIRNI III. Status Report No.18, NR No.083-033. Cornell University, Ithaca, NY.

Elner, RoW. and A. Campbell. 1987. Natural diets of lobster *Homarus americanus* from barren ground and macroalgal habitats off southwestern Nova Scotia, Canada. *Marine Ecology Progress Series* 37:131–140.

Emmel, V .E. 1908. The problem of feeding in artificial lobster culture. *Annual Report R.I. Comm. Inland Fish.* 38:99–114.

Ennis, G.P. 1980. Size-maturity relationships and related observations in Newfoundland populations of the lobster *Homarus americanus*. *Canadian Journal of Fisheries and Aquatic Science* 37:945–956.

Ennis, G.P. 1984. Territorial behavior of the American lobster *Homarus americanus*. *Transactions of the American Fisheries Society* 113:330–335.

Ennis, G.P. 1995. Chapter 3. Larval and Postlarval Ecology. pp.23–46 In: *Biology of the Lobster Homarus americanus*. J.R. Factor (ed.). Academic Press, Inc.

ENSR, 1999. Environmental Fatal Flaws Evaluation for Iroquois Gas Company Eastchester Pipeline Project. Confidential. ENSR Consulting and Engineering, July 12, 1999.

Evergreen Project, Inc. 1999. Ocean animals: green sea turtle. Website: http://mbgnet.mobot.org/salt/animals/green.htm.

Fischer, W., I. Sousa, C. Silva, A. de Freitas, J.M. Poutiers, W. Schneider, T.C. Borges, J.P. Feral, and A. Massinga. 1990. Fichas.

Franz, D. 1976. Benthic molluscan assemblages in relation to sediment gradients in northeastern Long Island Sound, Connecticut. *Malacologia* 15(2):377–399.

Fredette, T.J., J.D. Germano, D.A. Carey, P.M. Murry, and P.G. Kullberg. 1992. Chemical stability of capped dredged material disposal mounds in long Island Sound, USA. *Chemistry and Ecology* 7:173–194.

Fredette, T.J., P.G. Kullberg, D.A. Carey, R.W. Morton, and J.D. Germano. 1993. Twenty-five years of dredged material disposal site monitoring in Long Island Sound: A long-term perspective. pp. 153–161 In: Long Island Sound Research Conference Proceedings, Van Patten, M.S. (ed). University Connecticut Sea Grant, Pub. No. CT -SG-93-03, Storrs, CT

Freidrich, N.E., R.L. McMaster, H.F. Thomas, and R.S. Lewis. 1986. Non-energy resources: Connecticut and Rhode Island coastal waters. U.S. Dept.Interior, Minerals Management Service Cooperative Agreement No. 14-12-0001-30115, Final Report FY 1984. 55pp.

Frimodt, C. 1995. Multilingual illustrated guide to the world's commercial coldwater fish. Fishing News Books, Osney Mead, Oxford, England. 215 pp.

Fritts, T.H., A.B. Irvine, R.D. Jennings, L.A. Collum, W. Hoffman, and M.A. McGee. 1983. Turtles, birds, and mammals in the northern Gulf of Mexico and nearby Atlantic waters. U.S. Fish and Wildl. Serv, Division of Biological Services, Washington, D.C. FWS/OBS-82/65. 455pp.

Gallagher, E. D. and J.F. Grassle. 1997. Virginian Province macroinfaunal community structure: PCA-H analyses and an assessment of pollution degradation indices. Final Report to US Environmental Protection Agency, Atlantic Ecology Division. 112 pp.

Gilbert, J. 2001. Chairperson and Professor of Wildlife Resources, Professor of Marine Sciences, University of Maine. Orono, ME. Personal Communication, March 29, 2001.

Gordon, R.B., D.C. Rhoads, and K.K. Turekian. 1972. A report to the U.S. Army Corps of Engineers on the environmental consequences of dredge spoil disposal in Central Long Island Sound. I. The New Haven Spoil Ground and New Haven Harbor. SR-7, October 1972.

Gordon, R.B. 1973. Dispersion of dredge spoil dumped in a tidal stream: observations at the New Haven dump site. SR-19. December, 1973.

Gottschall, K., M.W. Johnson, and D.G. Simpson. 2000. The Distribution and Size Composition of Finfish, American Lobster and Long-finned Squid in Long Island Sound Based on the Connecticut Fisheries Division Bottom Trawl Survey, 1984–1994.

Grant, E.M. 1982. Guide to Fishes. Dep. Harbours Mar ., Brisbane, Queensland, Australia. 896 pp.

Greig, R.A., R.N. Reid, and D.R. Wenzloff. 1977. Trace metal concentrations in sediments from Long Island Sound. *Marine Pollution Bulletin* 8:183–188.

Gunn, L.A. 1987. The Feeding Ecology of American Lobster Larvae in Long Island Sound. M.S. Thesis. Southern Connecticut State University, New Haven CT.

Hall, S.J. 1994. Physical disturbance and marine benthic communities: life in unconsolidated sediments. *Oceanography and Marine Biology Reviews* 32:179–239.

Hall, S.J., M.R. Robertson, D.J. Basford, and R. Fryer. 1993. Pit-digging by the crab *Cancer pagurus*: a test for long-term, large-scale effects on infaunal community structure. *Journal of Animal Ecology* 62:59–66.

Hampson, G. R. 1971. A species pair of the genus *Nucula* (Bivalvia) from the eastern coast of the United States. *Proceedings of the Malacological Society of London* 39:333–342.

Harding, G.C., K.F. Drinkwater, and W.P. Vass. 1983. Factors influencing the size of American lobster (*Homarus americanus*) stocks along the Atlantic coast of Nova Scotia, Gulf of St Lawrence, and Gulf of Maine: A new synthesis. *Canadian Journal of Fisheries and Aquatic Science* 40:168–184.

Heneman, B. and the Center for Environmental Education. 1988. Chapter V. Persistent marine debris in the North Sea, northwest Atlantic Ocean, wider Caribbean area, and the west coast of Baja California. A report to the Marine Mammal Commission and the National Ocean Pollution Program Office, NOAA/DOC. Contract MM3309598-5. Washington, D.C. 36 pp.

Herrnkind, W.F. 1980. Spiny lobsters: Patterns of movement. pp. 349–407. In: *The Biology and Management of Lobsters. Volume 1.* Cobb, J.S. and B.F. Phillips (eds.) Academic Press, New York.

Herrick, F.H. 1895. The American lobster: A study of its habits and development. *Bulletin of the U.S. Fish Commission* 15:1–252 + plates A-J and 1-54.

Herrick, F.H. 1909. Natural history of the American lobster. *Bulletin of the U.S. Bureau of Fisheries* 29:149–408 + plates XXVIII-XLVII.

Hubbs, C.L. and A.B. Rechnitzer. 1952. Report on experiments designed to determine effects of underwater explosions on fish life. *California Fish and Game* 38(3):333–366.

Hudon, C. 1987. Ecology and growth ofpostlarval and juvenile lobster, *Homarus americanus*, off Iles de la Madeleine (Quebec). *Canadian Journal of Fiseries and Aquatic Science* 44:1855–1869.

Hudon, C., and G. Lamarche. 1989. Niche segregation between American lobster *Homarus americanus* and rock crab Cancer irroratus. *Marine Ecology Progress Series* 52:155–168.

HydroQual, Inc. New Jersey. 1991. Water quality modeling analysis of hypoxia in Long Island Sound. July 1991.

Ingle, R.M. 1952. Studies on the effect of dredging operations upon fish and shellfish. Technical Series No. 5. Florida State Board of Conservation, St. Petersburg, FL.

Iroquois. 2000. Application of Iroquois Gas Transmission System, L.P., for a certificate of Convenience and Necessity. Volume II and III Environmental Resource Reports. Docket No. CP00-232-000.

Juinio, M.A.R. and J.S.Cobb. 1992. Natural diet and feeding habits of the postlarvallobster Homarus americanus. *Marine Ecology Progress Series* 85:83–91.

Jury, S.H., W.H. Howell, and W.H. Watson III. 1995. Lobster movements in response to a hurricane. *Marine Ecology Progress Series* 119:305–310.

Kaiser, M.J., D.B. Edwards, P.J. Armstrong, K. Radford, N.E.L. Lough, R.P. Flatt, and H.D. Jones. 1998. Changes in megafaunal benthic communities in different habitats after trawling disturbance. *ICES Journal of Marine Science* 55:353–361.

Kaplan, E.H., J.R. Welker, and M.G. Kraus. 1974. Some effects of dredging on populations of macrobenthic organisms. *U.S. National Marie Fisheries Service Fisheries Bulletin* 72(2):445–480.

Karnofsky, E.B., J. Atema, and R.H. Elgin. 1989. Natural dynamics of population structure and habitat use of the lobster, *Homarus americanus*, in a shallow cove. *Biological Bulletin* (Woods Hole, Mass) 176:247–256.

Klemens. M.W. 1993. Amphibians and Reptiles of Connecticut and Adjacent Regions. State Geological and Natural History Survey of Connecticut. Bulletin No. 112. 318 pp.

Knebel, H.J., R.P. Signell, R.R. Rendigs, L.J. Poppe, and J.H. List. 1999. Seafloor environments in the Long Island Sound estuarine system. *Marine Geology* 155:277–318.

Kranz, P. 1974. The anastrophic burial of bivalves and its paleoecologic significance. *Journ. Geol.* 82:237–265.

Last, P.R. and J.D. Stevens. 1994. *Sharks and Rays of Australia.*

Lavalli, K. L. 1991. Survival and growth of early-juvenile American lobsters, *Homarus americanus*, through their first season while fed diets of mesoplankton, microplankton and frozen brine shrimp. *Fishery Bulletin* 89:61–68.

Lavalli, K. L., K. Brayer, and J.L. Ayers. 1995. Shelter usage by juvenile American lobsters, *Homarus americanus*, while under predation risk: The role of prior experience with predators. Unpublished MS.

Lawton, P. and K.L. Lavalli, 1995. Chapter 4. Postlarval, Juvenile, Adolescent, and Adult Ecology. pp. 47–88 In: *Biology of the Lobster* Homarus americanus. (J.R. Factor, ed.) Academic Press, Inc.

Leavitt, D.F., R.C. Bayer, M.L. Galllagher, and J.H. Rittenburg. 1979. Dietary intake and nutritional characteristics in wild American lobsters (*Homarus americanus*). *Journal of the Fisheries Board of Canada* 36:965– 969.

Leim, A.H. and W.B. Scott. 1966. Fishes of the Atlantic coast of Canada. *Bulletin of the Fisheries Board of Canada* 155: 1– 485.

Long Island Sound Study (LISS). 1993. Hypoxia and nutrient enrichment assessment of conditions and management recommendations. The Long Island sound Study Comprehensive Conservation and Management Plan Support Document.

Long. E.R. and L.G. Morgan. 1990. The Potential for Biological Effects of Sediment-Sorbed Contaminants Tested in the National Status and Trends Program. NOAA Technical Memorandum NOS OMA 52. National Oceanic and Atmospheric Administration. Seattle. WA.

Long. E.R., D.D. Macdonald. S.L. Smith. and F.D. Calder. 1995. Incidence of adverse biological effects within ranges of chemical concentrations in marine and estuarine sediments. *Environmental Management* 19(1):61–87.

Marquez-M., Rene. 1994. Synopsis of biological data on the Kemp's ridley turtle. *Lepidochelys kempi*. (Garman, 1880). NOAA Technical Memorandum NMFSSEFSC-343. 91pp.

May, J.L. and J.G.H. Maxwell. 1986. *Trawl Fish from Temperate Waters of Australia.* CSIRO Division of Fisheries Research, Tasmania. 492 pp.

Maurer, D.L., R.T. Keck, J.C. Tinsman, W.A. Leathem, C.A. Wethe, M. Huntzinger, C. Lord, and T.M. Church. 1978. Report D-78-35, Washington, D.C., U.S. Army Corps of Engineers. 42 pp.

McCall, P.L. 1977. Community patterns and adaptive strategies of the infaunal benthos of Long Island Sound. *Journal of Marine Research* 35:221–266.

McCall, P.L. 1978. Spatial-temporal distributions of Long Island Sound infauna: the role of bottom disturbance in a nearshore habitat. pp. 191–219 In: M.L. Wiley (ed.) *Estuarine Interactions.* Academic Press, N.Y.

McDaniel, C. 2001a. National Marine Fisheries Service, Milford, CT. Personal Communication, March 12, 2001.

McDaniel, C. 2001b. National Marine Fisheries Service, Milford, CT. Personal Communication, March 26, 2001.

Miller, R.J., K.H. Mann, and D.J. Scarrat. 1971. Production potential of a seaweed-lobster community in Eastern Canada. J. Fish. Res. Bd. Canada. 28:1733-1738.

Minerals Management Service. 1990. Gulf of Mexico Sales 131, 135, and 137: Central, Western, and Eastern Planning Areas. Final Environmental Impact Statement. U. S. Dept of the Interior. Minerals Management Service. Gulf of Mexico OCS Region EIS/EA, MMS 90-0042.

Minerals Management Service. 1996. Gulf of Mexico Sales 166 and 168: Central and Western Planning Areas. Draft Environmental Impact Statement. U.S. Dept. Of the Interior. Minerals Management Service. Gulf of Mexico OCS Region. OCS EIS/EA, MMS 96-0007.

Minerals Management Service. 1997. Ecosystem Analysis of the Louisiana Bight and Adjacent Shelf Environments; Vol. I: The Fdate of Organic Matter and Nutrients in the Sediments of the Louisiana Bight (OCS Study MMS 96-0055); Vol. II: Bibliography of Ecological Studies (MMS 96-0057). Brent A. McKee (Vol. II). 129 p.

Minerals Management Service. 1998. Gulf of Mexico OCS and Gas Lease Sales 171,174, 177, and 180. Western Planning Area. Final Environmental Impact Statement. U.S. Department of the Interior. Minerals Management Service. Gulf of Mexico OCS Region. OCS EIS/ES MMS 98-0008.

Morton, R.W. 1979a. Stamford-New Haven disposal operation, monitoring survey report #1. Baseline Surveys, 30 March 1979. Naval Underwater Systems Center, Newport, RI.

Morton, R.W. 1979b. Stamford-New Haven disposal operation, monitoring survey report #2. 20,000 cubic yards increment, 13 April 1979, Naval Underwater Systems Center, Newport, RI.

Morton, R.W. 1979c. Stamford-New Haven disposal operation, monitoring survey report #3. 50,000 cubic yards-southern site, 10,000 cubic yards-northern site, 30 April 1979. April 1979, Naval Underwater Systems Center, Newport, RI.

Morton, R.W. 1979d. Stamford-New Haven disposal operation, monitoring survey report #5. Post disposal surveys, 30 June 1979. Naval Underwater Systems Center, Newport, RI.

Morton, R.W. 1979e. Stamford-New Haven disposal operation, monitoring survey report #6. Post disposal monitoring. August 1979. Naval Underwater Systems Center, Newport, RI.

National Marine Fisheries Service and U.S. Fish and Wildlife Service. 1991. Recovery Plan for U.S. Populations of the Loggerhead Turtle. National Marine Fisheries Service, Washington, D.C.

National Marine Fisheries Service. 1998a. Final Amendment #11 to the Northeast Multispecies Fishery Management Plan, Amendment #9 to the Atlantic Sea Scallop Fishery Management Plan, Amendment #1 to the Atlantic Salmon Fishery Management Plan, Components of the Proposed Atlantic Herring Fishery Management Plan for Essential Fish Habitat: Incorporating the Environmental Assessment. Volumes I & II. New England Fishery Management Council in consultation with National Marine Fisheries Service. October 7, 1998.

National Marine Fisheries Service. 1998b. Final Recovery Plan for the Shortnose Sturgeon (*Acipenser breviostrum*). Prepared by the Shortnose Sturgeon recovery team for the National Marine Fisheries Service. Silver Spring, MD.

National Marine Fisheries Service. 1999. National Marine Fisheries Service, Northeast Fisheries Science Center. www.nefsc.nmfs.gov.

National Marine Fisheries Service. 1999. Leatherback sea turtles: endangered species [online report]. NMFS, Office of Protected Resources, Silver Springs, MD. Website: http://www.nmfs.gov/prot_res/turtles/leathtur.html.

National Marine Fisheries Service. 2001b. Kemp's ridley turtle (*Lepidochelys kempii*). National Oceanic and Atmospheric Administration Fisheries, National Marine Fisheries Service, Office of Protected Resources. Website: http://www.nmfs.gov/prot_res/species/turtles/kemps.html.

National Marine Fisheries Service. 2001a. Green sea turtle (*Chelonia mydas*). National Oceanic and Atmospheric Administration Fisheries, National Marine Fisheries Service, Office of Protected Resources. Website: http://www.nmfs.gov/prot_res/species/turtles/green.html.

National Marine Fisheries Service. 2001c. Shortnose sturgeon (*Acipenser brevirostrum*). National Oceanic and Atmospheric Administration Fisheries, National Marine Fisheries Service, Office of Protected Resources. Website: http://www.nmfs.noaa.gov/prot_res/species.

National Marine Fisheries Service. 2001d. National Marine Fisheries Service, Fisheries Statistics and Economics Division. www.st.nmfs.gov/stl/

species/turtles/Shortnose_sturgeon.html.

National Coastal Pollutant Discharge Inventory (NCPDI). 1986. Estimates for Long Island Sound. National Oceanic and Atmospheric

New England River Basins Commission (NERBC). 1980a. Interim plan for the disposal of dredged material from Long Island Sound. June, 1980.

New England River Basins Commission (NERBC). 1980b. Interim plan for the disposal of dredged material from Long Island Sound. August, 1980.

New England Fishery Management Council. 1998. Final Amendment #11 to the Northeast Multispecies Fishery Management Plan, Amendment #9 to the Atlantic Sea Scallop Fishery Management Plan, Amendment #1 to the Atlantic Salmon Fishery Management Plan, Components of the Proposed Atlantic Herring Fishery Management Plan for Essential Fish Habitat: Incorporating the Environmental Assessment. Volumes I & II. New England Fishery Management Council in consultation with National Marine Fisheries Service. October 7, 1998.

New York Department of Environmental Conservation. 2001. Endangered and Threatened Fishes of New York. Website: http://www.dec.state.ny.us/website/dfwmr/fish/fishspecs/endgtext.html.

New York Department of Environmental Conservation. 1999. Technical Guidance for Screening Contaminated Sediments. New York State Department of Environmental Conservation, Division of Fish, ildlife and Marine Resources. January 1999.

New York Power Authority. 1987. Sound Cable Project: Application to the State of New York Public Service Commission for Certificate of Environmental Compatibility and Public Need. February 1987. 500 pp. + Appendices.

Nichols, J.A., G.T. Rowe, C.H. Clifford, and R.A. Young. 1978. In situ experiments on the burial of marine invertebrates: Jour. Sedimentary Petrology, 48,419–425.

Nowojchik, R. 1999. Mystic Aquarium. Personal Communication to Iroquois. Mystic Aquarium, Mystic, CT.

National Oceanic and Atmospheric Administration. 1984. NOAA Navigational Charts, 12354 and 12363, 1984.

National Oceanic and Atmospheric Administration. 1986. Data Characterizations for Western Long Island Sound. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Environmental Satellite, Data, and Information Service, NODC Informal Report #2.

National Oceanic and Atmospheric Administration. 1994. Distribution and Abundances of Fishes and Invertebrates in Mid-Atlantic Estuaries. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, NOS. ELMR Report Number 12. 280 pp.

National Oceanic and Atmospheric Administration. 1998a. Amentment 12 to the Summer Flounder, Scup, and Black Sea Bass Fishery Management Plan. Mid-Atlantic Fishery Management Council and NOS. Award No. NA57FCOO02. 398 pp.

National Oceanic and Atmospheric Administration. 1998b. Amendment 1 to the Bluefish Fishery Management Plan. Volumes 1 and 2 with appendices. Mid-Atlantic Fishery Council Award No. NA57FCOO02. 341 pp.

National Oceanic and Atmospheric Administration. 1998c. Amendment 8 to the Atlantic Mackerel, Squid, and Butterfish Fishery Management Plan. Mid-Atlantic Fishery Management Council and NOS. Award No. NA57FCOO02. 351 pp.

National Oceanic and Atmospheric Administration. 1998d. Amendment # 11 to the Northeast Multispecies Fishery management Plan, Amendment #9 to the Atlantic Sea Scallop Fishery Management Plan, Amendment #1 to the Monkfish Fishery Management Plan, Amdendment # 1 to the Atlantic Salmon Fishery Management Plan, Components of the Proposed Atlantic Herring Fishery Management Plan for Essential Fish Habitat. Volume I. New England Fishery Management Council and NOAA. 388 pp.

National Oceanic and Atmospheric Administration. 1998e. United States Coast Pilot 1. Atlantic Coast: Eastport to Cape Cod. 31st Edition. Washington D.C.

National Oceanic and Atmospheric Administration, 1999. Guide to Essential Fish Habitat Designations in the Northeastern United States. Volume III: Connecticut and New York. March 1999. 104 pp.

Northeast Utilities Service Company. 1999. Monitoring the marine environment of Long Island Sound at Millstone Nuclear Power Station, Waterford, Connecticut. Annual Report 1998.

Oceanic Research Foundation. 2000. The green sea turtle. Website: http://www.orf.org/turtles_green.html.

O'Connor, J.M. and J.A. Sherk. 1976. Effects of sedimentation of coastal zone organisms. Third Federal Interagency Sedimentation Conference, Denver, CO.

Odum, H.T. and R.F. Wilson. 1962. Further studies on reaeration and metabolism of Texas bays, 1958–1960. *Publications of the Institute of Marine Science, University of Texas at Austin* 8:23–55.

Okubo, A. 1971. Transport processes and reservoirs: horizontal and vertical mixing in the sea. pp. 89–168 In: D.W. Hood (ed.). *Impingement of Man on the Oceans*. Wiley-Interscience, NY.

Oliver, J.S. and P.N. Slattery. 1985. Destruction and opportunity on the seafloor: effects of gray whale feeding. *Ecology* 66: 1965–1975.

Parker, C.A. and J.E. O'Reilly. 1991. Oxygen depletion in Long Island Sound: A historical perspective. *Estuaries* 14:248–264.

Pellegrino, P.E. and W.A. Hubbard. 1983. Baseline shellfish data for the assessment of potential environmental impacts associated with energy activities in Connecticut's coastal zone. State of Connecticut Department of Agriculture, Aquaculture Division. Volumes 1 and 2.

Poland, R. 1996. EuroTurtle ooutlines: leatherback turtle (*Dermochelys coriacea*) [online report]. King's College, Tauton, Somerset, United Kingdom. URL: http://www.ex.ac.uk/telematics/EuroTurtle/leather.htm.

Posey, M. Lindberg, W., Alphin, T., and F. Vose. 1996. Influence of storm disturbance on an offshore benthic community. *Bulletin of Marine Science* 59:523–529.

Reid, R.N., A.B. Frame, and A.F. Draxler. 1979. Environmental baselines in Long Island Sound, 1972–73. NOAA Technical ReportNMFS SSRF-738. U.S. Department of Commerce.

Reid, R.N. 1979. Long-term fluctuations in the mud-bottom macrofauna of Long Island Sound, 1972–1978. Masters Thesis. Boston University, Boston, MA.

Rhoads, D. C., and J.D. Germano. 1990. The use of REMOTS® imaging technology for disposal site selection and monitoring. In: Geotechnical Engineering of Ocean Waste Disposal, ASTM Symposium Volume, January, 1989, Orlando, Florida, pp. 50-64.

Rhoads, D. C., P. G. Kullberg, and T. J. Fredette. 1995. Dredged material disposal within an estuary: is it a significant source of sediment and contaminant fluxes? The case of Long Island Sound. Proceedings of the Conference Ports '95, Vol. I, M.A. Knott, ed., Tampa, Florida, pp. 428-439.

Rhoads, D.C. 1994a. Analysis of the contribution of dredged material to sediment and contaminant fluxes in Long Island Sound. Contribution #88. U.S. Army Corps of Engineers. SAIC Report number 89/7571 & C82. 33pp.

Rhoads, D.C. 1994b. Analysis of the contribution of dredged material to sediment and contaminant fluxes in Long Island Sound: DAMOS Special Technical Report/Contribution # 88, 34 pgs.

Rhoads, D.C. and L.F. Boyer. 1982. The effects of marine benthos on physical properties of sediments: a successional perspective. pp. 3–52 In: P.L. McCall and M.J.S. Tevesz (eds.), *Animal-Sediment Relations*. Plenum Publishing, NY.

Rhoads, D.C., and J .D. Germano. 1982. Characterization of organism-sediment relations using sediment profile imaging: an efficient method of remote ecological monitoring of the seafloor (REMOTS System). Marine Ecology Progress Series 8: 115–128.

Rhoads, D.C. and J.D. Germano. 1986. Interpreting long-term changes in benthic community structure: a new protocol. *Hydrobiologia* 142:291–308.

Rhoads, D.C., R.C.Aller, and M.B. Goldhaber. 1977. The influence of colonizing benthos on physical properties and chemical diagenesis of the estuarine seafloor. pp. 113–138 In: B.C. Coull (ed.), *Ecology of Marine Benthos*, Univ. South Carolina Press, Columbia.

Rhoads, D.C., J.Y. Yingst, and W.J. Ullman. 1978. Seafloor stability in central Long Island Sound, Part I. Temporal changes in erodibility offine-grained sediment: pp. 221–244 In: *Estuarine Interactions* M.L. Wiley (ed.). Academic Press, NY. 603 pp.

Rhoads, D.C., L.F. Boyer, B.L. Welsh, and G.R. Hampson. 1984. Seasonal dynamics of detritus in the benthic turbidity zone (BTZ): implications for bottom-rack molluscan mariculture. *Bulletin of Marine Science* 35:536–549.

Richards, S.W. and G.A. Riley. 1967. The benthic epifauna of Long Island Sound. Bulletin Bingham f Oceanography Collection 19: 89–135.

Rossiter, D. 2001. Personal Communication on September 24, 2001 between C. Fuller (ENSR-International) and D. Rossiter (Connecticut Department of Transportation-Marine Division).

Rusanowski, D. 2001. National Marine Fisheries Service, habitat Assessment Branch. Milford, CT. Personal Communication, February 14, 2001.

Ryan, P .G. 1990. The effects of ingested plastic and other marine debris on seabirds. pp. 623–634. In: *Proceedings of the Second International Conference on Marine Debris.* R.S. Shomura, and M.L. Godfrey (eds.) Honolulu, Hawaii. U.S. Dept. Of Commerce, NOAA Tech. Memo. NMFS, NOAA-TM-NMFS-SWFSC-154.

Palermo, M. R., Shafer, R. A., Brannon, J. M., Myers, T. E., Truitt, C. L., Zappi, M. E., Skogerboe, J. G., Sturgis, T. C., Wade, R., Gunnison,D., Griffin, D. M., Tatum, H., and Portzer, S. 1989. "Evaluation of Dredged Material Disposal Alternatives for U.S. Navy Homeport at Everett, Washington," Technical Report EL-89-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

Sanders, H.L. 1956. Oceanography of Long Island Sound. X. The biology of marine bottom communities. *Bulletin Bingham Oceanography Collection* 15:245–258.

Scarratt, D.J. 1968. An artificial reef for lobsters (*Homarus americanus*). *Journal of the Fisheries Board of Canada* 25(12):2683–2690.

Scarratt, D.J. 1980. The food of lobsters. *Canadian Technical Reports, Fisheries and Aquatic Sciences* 954:66–91.

Sherk, J.A., J.M. O'Connor, D.A. Neumann, R.D. Prince, and K.V. Wood. 1974. Effects of suspended and deposited sediments on estuarine organisms. Phase II. Final Report No.74-20. Natural Resources Institute of the University of Maryland, Prince Frederick, MD. Prepared for the U.S. Army Coastal Engineering Research Center, Fort Belvoir, V A. Report AD-AO11 372. 180 pp. distributed by NationalTechnical Information Service (NTIS).

Signell, R.P., H.J. Knebel, J.H. List, and A.S. Farris. 1998. Chapter 6. Physical processes affecting the sedimentary environments of Long Island Sound. In: *Long Island Sound Environmental Studies.* U.S. Geological Survey Open-File Report 98–502.

Sileo, L., P.R. Sievert, M.D. Samuel, and S.I. Fefer. 1990. Prevalence and characteristics of plastic ingested by Hawaiian seabirds. pp 665–681 In: *Proceedings of the Second International Conference on Marine Debris, 2–7 April 1989.* Shomura, R.S. and M.L. Godfrey (eds.) Honolulu, Hawaii. U.S. Dept. Of Commerce. NOAA Technical Memo. NMFS, NOAA- TM-NMFS-SWFSC-154.

Smith, E.M. and P.T .Howell. 1987. The effects of bottom trawling on American lobsters, *Homarus americanus*, in Long Island Sound. *Fishery Bulletin* 85(4):737– 744.

Squires, H.J. 1970. Lobster (*Homarus americanus*) fishery and ecology in Port au Port Bay, Newfoundland, 1960–65. *Proceedings of the National Shellfish Association* 60:22–39.

Stacey, P. E., 2001. Long Island Sound summer hypoxia. Connecticut Department of Environmental Protection fact sheet. 3 pp.

Stern, E.M., and W.B. Stickle. 1978. Effects of Turbidity and Suspended Material in Aquatic Environments: Literature Review. Technical Report D-78-21. Prepared by the University of Wisconsin and Louisiana State University, for the U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Mississippi.

Sun, M., R.C. Aller, and C. Lee. 1994. Spatial and temporal distributions of sedimentary chloropigments as indicators of benthic processes in Long Island Sound: *Journal of Marine Research* 52:149–176.

Swanson, K. 1977. Benthic polychaete distributions in Fisher Island Sound and their relationship to the substrate. Master's Thesis, University of Connecticut, Storrs, CT .

Talbot, P. and S. Helluy 1995. Chapter 9. Reproduction and Embryonic Development. pp.177–216 In: *Biology of the Lobster Homarus americanus.* J.R. Factor(ed.) Academic Press, Inc.

Teleki, G.C. and A.J. Chamberlain. 1978. Acute effects of underwater construction blasting on fishes in Long Point Bay, Lake Erie. Journal of Fisheries Resources Board of Canada. 35: 1191–1198.

Templeman, W. and S.N. Tibbo. 1945. Lobster investigations in Newfoundland 1938 to 1941. *Newfoundland Department of Natural Resources Research Bulletin (Fisheries)* 16:1–98.

Thales GeoSolutions. 2001. Survey Report. Iroquois East Long Island (ELI) Extension Project. Prepared by Thales GeoSolutions, Houston, TX.

Thalhauser, J. 2001. Save the Sound. Personal Communitcation.

Thomas, H.E. 1962. The meterologic phenomena of drought in the Southwest. U.S. Geological Survey Professional Paper 372-A. 42 pp.

Turekian, K.K., J.K. Cochran, L.K. Benninger, and R.C. Aller 1980. The sources and sinks of nuclides in Long Island Sound. pp. 129–164 In: *Estuarine Physics and Chemistry; Studies in Long Island Sound.* B. Saltzman (ed.) Advances in Geophysics, v. 22. Academic Press, N.Y. 424 pp.

United States Army Corps of Engineers, New England Division. 1991. Western Long Island Sound WLIS. Final Supplemental Environmental Impact Statement for a Dredged Material Disoposal Site. February 1991.

USEPA. 1999. EPA's BEACH Watch Program: 1999 Update. U.S. Environmental Protection Agency, EPA-823-F-99-004. U.S. Environmental Protection Agency, Office of Water, Washington, DC.

United States Fish and Wildlife Service and National Marine Fisheries Service. 1992. Recovery Plan for the Kemp's ridley Sea Turtle (*Lepidochelys kempii*). National Marine Fisheries Service, St. Petersburg, Florida.

United States Fish and Wildlife Service. 1997. Significant Habitats and Habitat Complexes of the New York Bight Watershed. USFWS. Coastal Estuaries Program. Charlestown. RI. November. 1997.

United States Fish and Wildlife Service. 2001. Southern New England – New York Bight coastal ecosystems program: leatherback sea turtle (*Dermochelys coriacea*). Website: http://www.fws.gov/r5snep/fish-turt.htm.

United States Fish and Wildlife Service. 2001. Southern New England – New York Bight coastal ecosystems program: Atlantic (Kemp's) ridley turtle (*Lepidochelys kempii*). Website: http://www.fws.gov/r5snep/fish-turt.htm.

United States Fish and Wildlife Service. 2001. Southern New England - New York Bight coastal ecosystems program: green sea turtle (*Chelonia mydas*). Website: http://www.fws.gov/r5snep/fish-turt.htm.

United States Fish and Wildlife Service. 2001. Southern New England - New York Bight coastal ecosystems program: loggerhead sea turtle (Caretta caretta). Website: http://www.fws.gov/r5snep/fish-turt.htm.

USGS and NOAA. 1973. Sources and movement of water: an interim report. Long Island Sound Regional Study and New England River Basins Commission. New Haven, CT. 45 pp. + appendices.

Valiela, I. 1984. *Marine Ecological Processes*. Springer-Verlag, New York. 350pp.

Van Blaricom, G.R. 1982. Experimental analysis of structural regulation in a marine sand community exposed to oceanic swell. *Ecological Monographs* 52:283–305.

Vaught Shaffer, R. and E. L. Nakamura. 1989. Synopsis of biological data on the cobia *Rachycentron canadum* (Pisces: Rachycentridae). NOAA Technical Report NMFS 82. FAO Fisheries Synopsis. 153 pp.

Wahle, R.A. and R.S. Steneck. 1991. Recruitment habitats and nursery grounds of the American lobster *Homarus americanus*: A demographic bottleneck? *Marine EcologyProgress Series* 69:231–243.

Waslenchuk, D.G., E.A. Matson, R.N. Zajac, F.C. Dobbs, and J.M. Tramontano. 1983. Geochemistry of burrow waters vented by a bioturbating shrimp in Bermudian sediments. *Marine Biology* 72: 219–225.

Weisberg, S.B., J.B. Frithsen, A.F. Holland, J.F. Paul, K.J. Scott, J.K. Summers, H.T. Wilson, R.M. Valente, D.G. Heimbuch, G. Gerritsen, S.C. Schimmel, and R.W. Latimer. 1993. EMAP-Estuaries, Virginian Province 1990 Demonstration Project Rreport. EP N620/R-93/006. Narragansett, R.I.. US Environmental Protection Agency, Environmental Reseaarch Laboratory, Office of Research and Development.

Weiss, H.M. 1970. "The Diet and Feeding Behaviorofthe Lobster, Homarus americanus, in Long Island Sound," Ph.D. Dissertation. University of Connecticut, Storrs.

Welch, B.L., J .P .Herring, and L.M. Read. 1977. The effects of reduced wetlands and basins on the stability of a small Connecticut estuary .Pp. 381–401 In: Wiley, M.L. (ed. ) Estuarine Interactions. Academic Press, N.Y.

Welsh, B., and F.C. Eller. 1991. Mechanisms controlling summertime oxygen depletion in western Long Island Sound: Estuaries, 14.265–278.

Wouldiams, L. W .1907. The stomach of the lobster and the food of larval lobsters. Annu.. Rep.-R. Comm. ~ Inland Fish. 37153–180.

Wolfe, D.A., R. Monahan, P.E. Stacey, D.R.G. Farrow, and A. Robertson. 1991. Environmental quality of Long Island Sound: assessment and management issues. *Estuaries* 14:224–236.

Wolfe, D.A., S.B. Bricker, E. Long, K.J. Scott, and G.B. Thrusby. 1994. Biological effect of toxic contaminants in sediments from Long Island Sound environ. National Status and Trends Program for Marine Environmental Quality, NOAA Techinical Memorandum NOS ORCA80. 55 pp. +14 appendices.

Yingst, J. Y. 1978. Pattern of micro- and meiofaunal abundance in marine sediments measured with the Adenosine Triphosphate Assay. *Marine Biology* 47:41–5.

Yingst, J.Y. and D.C. Rhoads. 1978. Seafloor stability in central Long Island Sound. Part II. Biological interactions and their potential for seafloor erodability. pp 245–260 In: *Estuarine Interactions*. M. Wiley (ed.). Academic Press, NY.

Zajac, R.N. 1998. A review of research on benthic communities conducted in Long island Sound and an assessment of structure and dynamics. Chapter 4 in Long Island Sound Environmental Studies, U.S. Geological Survey Open-File Report 98-502.

Zajac, R.N., and R.B. Whitlatch. 1982a. Responses of estuarine infauna to disturbance. Spatial and temporal variation of initial recolonization. *Marine Ecology Progress Series* 10:1–14.

Zajac, R.N., and R.B. Whitlatch. 1982b. Responses of estuarine infauna to disturbance. II. Spatial and temporal variation of succession. *Marine Ecology Progress Series* 10:15–27.