

APPENDIX A

Application Modifications

APPENDIX A
Application Modifications

ORIGINAL PROPOSAL	REVISED PROPOSAL
↓	↓
Wetlands	
placement of an at-grade 24" diameter pipeline within a number of small wetland areas, both inland and tidal	no changes
Pipeline Installation: Horizontal Directional Drill Methodology	
installation of a sub-grade 24" diameter pipeline at Juniper Point utilizing the horizontal directional drilling (HDD) method to a point approximately 3500 feet offshore in Long Island Sound	no changes
Exit Pit Details	
excavation by clamshell bucket of a an HDD exit-pit: <ul style="list-style-type: none"> • 20' deep x 250' wide x 300' long • sidecasting/stockpiling of such sediment within a 65' area on three sides of such pit 	excavation by clamshell bucket of an HDD exit pit: <ul style="list-style-type: none"> • 18' deep x 130' wide x 310' long • removal of 6,000 cubic yards of sediment to be disposed of at an open water disposal site • backfill a portion of the HDD exit hole with approximately 3,000 cubic yards of material from the dredge trench and approximately 3,000 cubic yards of material to be determined (probably bank-run gravel)
Spoil Mound Warning Signage	
installation of illuminated navigation warning signage placed atop temporary timber piles along the route where sediment is stockpiled below the waterline	eliminated

Pipeline Installation: Trench Methodology

installation of a sub-grade 24" diameter pipeline by excavating with a clamshell bucket from the HDD exit-pit to a location at approximately milepost 12 to create a trench:

- 5' deep x 50' wide x 5808' long
- sidecast and stockpile sediments in mounds which extend over 60' in both directions from the trench
- pipe burial depth 3'
- backfill by plowing sidecast material back into the trench

installation of a sub-grade 24" diameter pipeline by excavating with a clamshell bucket from the HDD exit-pit to a location at approximately milepost 12 to create a trench:

- 5' deep x 37' wide x 5520' long
- removal of approximately 18,000 cubic yards of sediment to be disposed of at an open water disposal site
- pipe burial depth 18"
- backfill with new material consisting of bank run gravel

Pipeline Installation: Plow Methodology

installation of a sub-grade 24" diameter pipeline by utilizing a sub-sea plow for approximately 9 miles from milepost 12 to the state line between Connecticut and New York to create a trench:

- 5' deep trench x 25' wide at the top of slope
- sidecasts sediment mounds approximately 25' wide on either side
- four subsea plow passes
- anchor strike and cable sweep impact area in CT water is 1,331 acres

installation of a sub-grade 24" diameter pipeline by utilizing a sub-sea plow for approximately 9 miles from milepost 12 to the state line between Connecticut and New York to create a trench:

- 5' deep trench x 25' wide at the top of slope
- sidecasts sediment mounds approximately 25' wide on either side
- three subsea plow passes
- anchor strike and cable sweep impact area in CT water is 1,107 acres

Temporary Mooring Structures

none identified

installation of four temporary mooring piles at the HDD exit hole

APPENDIX B

Correspondence Receipt Dates

– APPENDIX B
Correspondence Receipt Dates

February 3, 2003 – At a technical working meeting (requested by Islander for all agencies), Islander introduced conceptual material for reduced lay barge passes, depth cover reduction from 3' to 18" and disposal of spoils rather than mounding.

February 20, 2003 – Islander formally submits revisions to WQC application for reduced lay barge passes, depth cover reduction from 3' to 18" and disposal of spoils rather than mounding.

March 14, 2003 – Department receives letter dated March 13, 2003. Islander withdraws WQC application and submits new one, including project modifications. In a separate submission, Islander submits the same project modifications to TW/SDF application for reduced lay barge passes, depth cover reduction from 3' to 18" and disposal of spoils rather than mounding.

March 18, 2003 – Islander submits lobster stakeholder data requested by Mark Johnson.

March 20, 2003 – DEP meets with Islander to discuss application revisions and review timeframes. Submit revised WQC application pages.

March 28, 2003 – Department receives letter dated March 27, 2003. Islander submits Engineered Backfill Plan

April 30, 2003 – Islander submits revised offshore maps

May 1, 2003 – Islander submits additional technical info requested at March 4 meeting regarding alternative technologies to reduce anchor impacts.

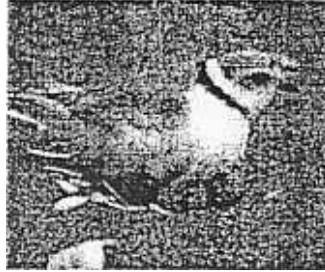
May 28, 2003 – Islander submits additional info (without alternatives analysis information) requested in May 5, 2003 letter from DEP.

June 20, 2003 – Islander submits dredging information requested by DEP in May 30, 2003 e-mail.

APPENDIX C

Northeast Coastal Areas Study:
Significant Coastal Habitats
Of Southern New England
And Portions of Long Island, New York

Press image to start



FINAL REPORT

**NORTHEAST COASTAL AREA STUDY
SIGNIFICANT COASTAL HABITAT
OF SOUTHERN NEW ENGLAND
AND PORTIONS OF LONG ISLAND NEW YORK**

submitted to

**U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON APPROPRIATIONS**

AND

UNITED STATES

COMMITTEE ON APPROPRIATIONS

August 1991

U.S. FISH AND WILDLIFE SERVICE
Southern New England - Long Island Sound Coastal and Estuary Office
Box 307
Charlestown, Rhode Island 02813

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biological diversity. The sand plains are a regionally rare and unique habitat, similar to the Hempstead Plains of Long Island, which is also only a small remnant of its former extent. The Quinnipiac Marshes are extremely productive biologically, in spite of the heavy industrialization that lines its banks and its chemically polluted waters and soils, especially with heavy metals. Migratory waterfowl using these marshes for nesting include American black duck, mallard (*Anas platyrhynchos*) and gadwall (*Anas strepera*), while northern harrier (*Circus cyaneus*), snowy egret and pied-billed grebe (*Podilymbus podiceps*) are suspected breeders. The marshes are also prime overwintering habitat for rough-legged hawk (*Buteo lagopus*) and snowy owl (*Nyctea scandiaca*).

VII. THREATS: The large seasonal concentrations of wildlife utilizing the extensive tidal mud and sand flats and open waters of this complex are extremely vulnerable to an oil spill or hazardous chemical discharge, particularly in New Haven Harbor. Numerous other activities potentially threaten natural ecosystems and fish and wildlife populations in this industrialized zone, including waste and sewage disposal, stormwater discharge, shoreline development, erosion control projects, channel dredging and wetland alterations. Heavy metal and PCB pollution of soils and waters is of special concern, as are contaminated sediments in portions of New Haven Harbor and Mill River due to stormwater, sewage treatment plant and industrial discharges. In spite of it all, however, significant wildlife populations continue to persist in this area, albeit at much reduced levels from former levels of abundance. Human-related disturbances to colonial beach-nesting terns and piping plovers, whether unintentionally or the result of purposeful intrusions into nesting areas and acts of vandalism, or from stray animals and unleashed cats and dogs, are of major concern at all known nesting localities in this area. There are several historical, but presently unoccupied, localities for breeding birds in this area, particularly for roseate tern (*Sterna dougallii*), a U.S. Endangered species. Such areas were likely abandoned due to disturbance.

VIII. CONSERVATION CONSIDERATIONS: Protection of the nearshore waters and intertidal flats from catastrophic events such as an oil spill or hazardous chemical discharge needs to be given the highest priority among resource concerns in this area. Attention needs to be focused not only on formulating oil spill contingency plans, but developing the highest degree of readiness to respond to such an event, particularly during critical times of the year when wildlife populations are at their peak and most vulnerable, such as spring and fall migrations and winter. Measures should also be sought and instituted, whether by regulation, zoning, planning, cooperative agreements or full-scale restoration programs such as the National Estuary Program, to restore, maintain, enhance and protect aquatic and terrestrial resources in this complex. Opportunities should be identified to restore or enhance degraded wetlands, including control of common reed, and other coastal habitats in this complex to increase their value to fish and wildlife. In addition to wetland habitats, the New Haven sand plains should be given high priority by the State in identifying and implementing restoration opportunities for this unique ecosystem.

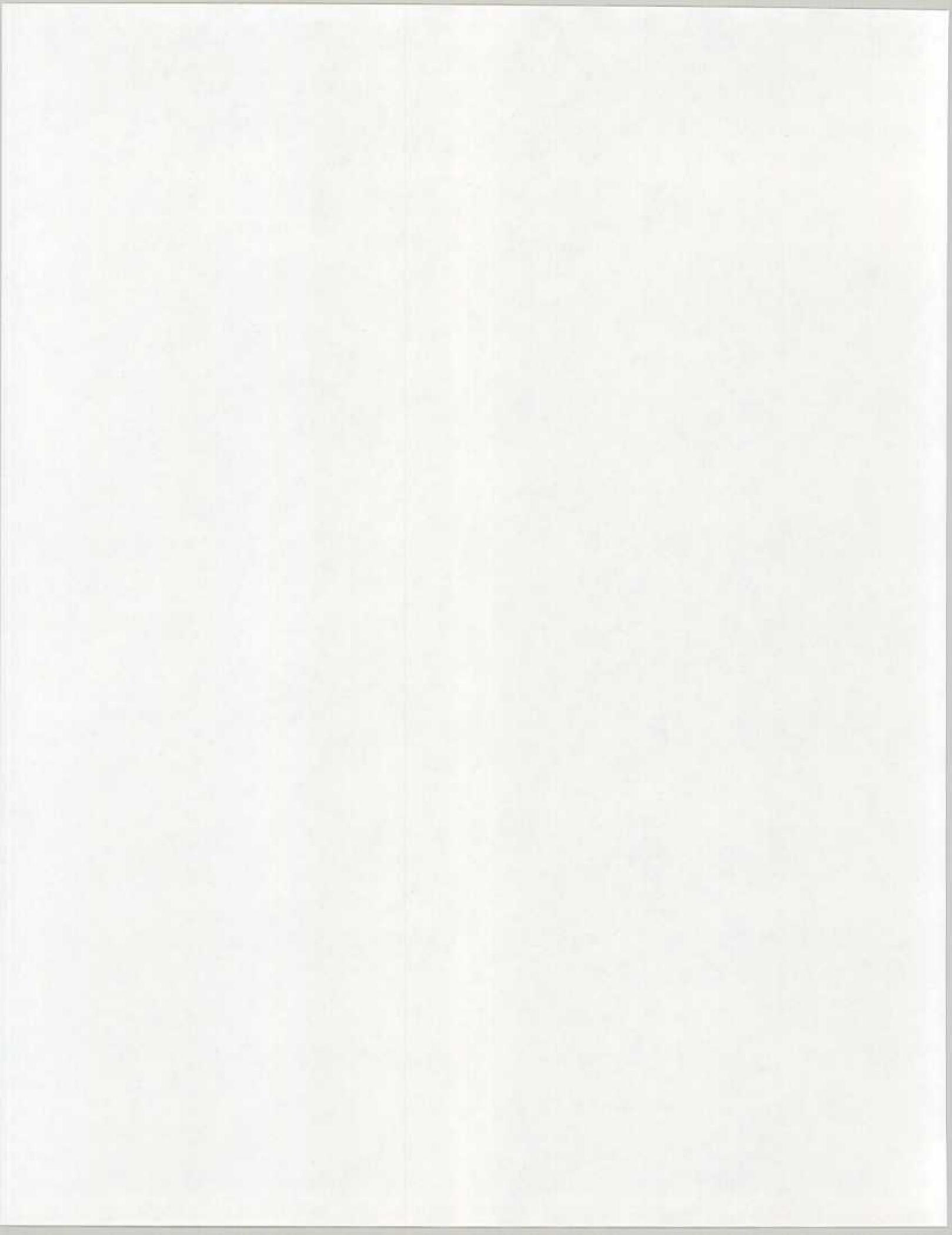
Disturbances to colonial nesting birds, whether sand beaches or island rookeries, need to be minimized or eliminated entirely. Human and stray animal intrusions into nesting areas during the critical nesting season (mid-April to August) should be prevented using a variety of methods, including fenced enclosures, posting, beach warden patrols, trapping of animals and public education. Pertinent tasks and objectives of the piping plover recovery plan should be identified and implemented on area beaches, especially those aimed at habitat restoration, enhancement and protection. A regional or basinwide conservation and management plan should be developed and implemented for protecting and enhancing wintering waterfowl populations in central and western Long Island Sound, in partnership with governmental agencies, private conservation groups and landowners.

marshes; 4) sand plains; 5) anadromous fish streams and rivers; 6) undeveloped coastal islands; and 7) nearcoastal waters of importance to migrating and wintering waterfowl. The Quinnipiac River marshes contain a diversity of habitat types, including: salt marsh dominated by cordgrasses (*Spartina alterniflora* and *S. patens*); extensive brackish marshes of dense stands of cattail (*Typha angustifolia*) and common reed (*Phragmites australis*); freshwater tidal marsh with a high diversity of species including sweet flag (*Acorus calamus*), broad-leaved cattail (*T. latifolia*), reed canary grass (*Phalaris arundinacea*) and wild rice (*Zizania aquatica*); and narrow fringes of floodplain forest dominated by green ash (*Fraxinus pennsylvanica*), red maple (*Acer rubrum*), black willow (*Salix nigra*) and silver maple (*A. saccharinum*). Salt marshes elsewhere in this complex are similar to those in the lower section of the Quinnipiac Marshes. The sand plains of the Quinnipiac occur on glacial terraces and are only a small remnant of their former extent. In many places wind-formed dunes and hummocks are prominent surface features. The plains vary from almost totally bare, desert-like, sandy areas with sparse vegetation to open grasslands of little bluestem (*Schizachyrium scoparium*) and lichens to low scrubby woodlands and forests of black oak (*Quercus velutina*) and pitch pine (*Pinus rigida*). Most of the sand plains area is heavily industrialized with only a few open or remnant natural areas remaining, such as in Wallingford. The Thimbles and other small rocky islands in the Branford-Guilford vicinity are a mixture of bedrock and glacial materials with cobble beaches and various vegetation types, from beach grass (*Ammophila breviligulata*) dunes to mature coastal woodlands and thickets with abundant poison ivy (*Toxicodendron radicans*) and oriental bittersweet (*Celastrus orbiculatus*). Tidal amplitude at the entrance to New Haven Harbor is 6.2 feet (1.89 m).

VI. SIGNIFICANCE/UNIQUENESS OF AREA: The sand and mud flats at Long Wharf, City Point and Morse Point/Sandy Point in New Haven Harbor are regionally significant staging areas for large concentrations of migrating sandpipers, terns, plovers, turnstones and other shorebirds and waterfowl that feed on these flats to sustain them on their long journeys southward or northward. Shorebird species of special note include semipalmated sandpiper (*Calidris pusilla*), dunlin (*Calidris alpina*), ruddy turnstone (*Arenaria interpres*), least sandpiper (*Calidris minutilla*) and sanderling (*Calidris alba*). The New Haven tidal flats are reported by State biologists to be the most important wintering area for American black duck (*Anas rubripes*) in Connecticut. Morse Point currently supports nesting populations of piping plover (*Charadrius melodus*), a U.S. Threatened species, and least tern (*Sterna antillarum*). Elsewhere in the complex, common terns (*Sterna hirundo*) nest on a few of the islands to the east of New Haven Harbor.

The open water areas and tidal flats in New Haven Harbor and the nearshore area south of Guilford, Branford and East Haven contain some of the largest and most important concentrations of wintering and migrating waterfowl along the Connecticut coast, especially American black duck, canvasback (*Aythya valisineria*), American wigeon (*Anas americana*), greater and lesser scaup (*Aythya marila* and *Aythya affinis*, respectively), common goldeneye (*Bucephala clangula*) and three species of scoter (*Melanitta* spp.). Wading bird rookeries are established on a few of the outer Thimbles, mostly snowy egret (*Egretta thula*), great egret (*Casmerodius albus*) and black-crowned night-heron (*Nycticorax nycticorax*). The nearshore areas also contain abundant shellfish beds, particularly for American oyster (*Crassostrea virginica*) and hard-shelled clams (*Mercenaria mercenaria*). The river systems in this complex all have anadromous fish runs in those reaches without barriers to fish passage. Anadromous fish using these rivers include American shad (*Alosa sapidissima*), sea-run brown trout (*Salmo trutta*), alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*), striped bass (*Morone saxatilis*) and white perch (*Morone americana*). New Haven Harbor is an important spawning and nursery area for winter flounder (*Pseudopleuronectes americanus*) and is heavily used by fishermen. Finfish common to this area include blackfish (*Tautoga onitis*), bluefish (*Pomatomus saltatrix*), weakfish (*Cynoscion regalis*), summer flounder (*Paralichthys dentatus*), and striped bass (*Morone saxatilis*).

Both the Quinnipiac River marshes and the upstream sand plains are important areas of regional



New Haven Harbor Complex Map 1 of 2

This document involves pipeline location information and is not available at this Internet site due to homeland security-related considerations. This portion of the Islander East consistency appeal administrative record may be reviewed at NOAA's Office of General Counsel for Ocean Services, 1305 East-West Highway, Silver Spring, Maryland.

DEP; Eric Smith, Penny Howell, Steve Gebhardt, Peter Minta and Dave Simpson, Division of Marine Fisheries, DEP; Jack Barclay and Don Squires, University of Connecticut; Milan Bull, Connecticut Audubon Society; Christopher Percy, The Sounds Conservancy, Inc.; and Tom Siccama, Yale University.

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There have been numerous contributors to this study and report, of which the majority have come from a solid core of knowledgeable, experienced and devoted professional biologists in the various Federal and State natural resource agencies and private conservation organizations in this region. Particular gratitude is expressed to the State Natural Heritage Programs and Fish and Game/Wildlife agencies in Connecticut, Massachusetts, New York and Rhode Island, the State Chapters and Field Offices of the Nature Conservancy in each of these same states, the Eastern Regional Office of The Nature Conservancy, especially Dennis Wolkoff, the National Audubon Society, and the many outstanding Fish and Wildlife Service biologists in the field offices, cooperative units, research stations and regional office in the Northeast Region (Region 5).

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IV. PROTECTION STRATEGIES

A variety of approaches and strategies exists for the protection of valuable wildlife habitats; each provides different degrees of protection and requires different levels of commitment by regulatory agencies, conservation organizations and landowners. These techniques range from the establishment of conservation easements, cooperative management agreements, zoning and land-use regulations, comprehensive planning, enforcement of existing local, state and Federal regulations, tax incentives, mutual covenants and land exchanges to fee simple acquisition. All four states in the study region have enacted special laws to protect coastal wetlands; these laws vary considerably in their degree of protection. Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act of 1977 mandate a strong Federal role for protecting the Nation's coastal wetlands and have proved to be very effective regulatory mechanisms for protecting wetland habitats in general. Federal permits are required for most types of construction in estuarine wetlands. While the regulatory tools to protect coastal wetlands are in place, continued enforcement of existing laws is required to maintain the integrity of the remaining wetlands. The Endangered Species Act and Migratory Bird Treaty Act are also used extensively by the Fish and Wildlife Service and National Marine Fisheries Service to provide protection to species listed under them. In addition to regulation, the Coastal Barrier Resources Act of 1982 removes Federal subsidies and discourages development of designated coastal barriers and adjacent wetlands. Executive Order 11990 - "Protection of Wetlands" - requires Federal agencies to develop guidelines to minimize destruction and degradation of wetlands and to preserve and enhance wetland values.

Successful application of these protection mechanisms can be enhanced through their use in concert with each other and in partnership with all parties involved. Selection of the most appropriate and effective combination of protection techniques and strategies should be determined only through careful consideration of the unique conditions and circumstances that apply to each individual site or complex.

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C. Discontinuous, though not necessarily remote, similar habitats that form an essential part, if not the entirety, of a species' population or metapopulation. —

To a large extent, habitat complexes as viewed here are very close to the bioserve concept, as defined earlier, currently being explored by The Nature Conservancy and efforts are being made to consider linking the two concepts closer in the future.

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In conjunction with the various project cooperators, the Service developed a list of southern New England and Long Island Coastal Species of Special Emphasis which it used in directing its efforts to identify habitat areas in need of protection. (See Appendix B.) These are primarily species of national or regional significance for which there is a clear Federal trust responsibility under one or more legislative authorities or mandates (e.g., Endangered Species Act, Marine Mammal Protection Act, Anadromous Fish Conservation Act, Migratory Bird Treaty Act, Fish and Wildlife Coordination Act) or which are considered in various regional planning documents (e.g., Regional Resource Plans, Fishery Management Plans, North American Waterfowl Management Plan) or are ecologically, commercially or recreationally important within the project study area. Many are species whose populations have seriously declined or are presently declining from historical levels of abundance in the region and/or are especially vulnerable to habitat loss and degradation, human disturbance, competition with exotic or nuisance species, overexploitation or environmental contaminants.

The list of Coastal Species of Special Emphasis contains 153 plant and animal species on which the Service concentrated its data collection efforts in this project. It includes 19 species of finfish, 9 shellfish, 5 reptiles, 2 amphibians, 61 bird species, 6 marine mammals, 7 terrestrial mammals, 12 invertebrates, and 32 plant species. This list is not an exhaustive accounting of all coastal species occurring in the study area, but, rather, represents those species of particular management concern on which the Service focused its inventory efforts.

C. Identification of Significant Habitats of Special Emphasis Species:

In this report, each of the significant, high-priority habitat sites and complexes of habitats is described individually and its approximate boundary delineated on a topographic map. These brief descriptions include the general physical and biological characteristics of each area, the significance, uniqueness or value of each area to Coastal Species of Special Emphasis and/or the biological diversity of the region, general ownership patterns, and threats to the ecological integrity of the site and/or species occurring there during critical life history stages. Also included for each site are conservation considerations developed by the Service on how to best protect these areas and the species which depend upon them. More detailed information on each of these sites is available through the Northeast Estuary Office in Charlestown, Rhode Island.

In identifying specific significant coastal habitats in need of protection, the Service focused on: 1) individual populations or occurrences of coastal species of special emphasis; 2) regionally or nationally significant habitat sites of special emphasis species and/or areas of exceptional biological diversity or community uniqueness; and 3) habitat complexes consisting of two or more and often several important and ecologically-linked habitats within a given geographic area. A knowledge of the distinctions between each of these approaches is necessary to understanding the rationale behind the identification and delineation of the sites presented in this report. They are as follows:

1) Individual Species Occurrences: Individual occurrences of coastal species of special emphasis were analyzed to identify areas important to one or more critical life history stages of these species, such as spawning, wintering and juvenile growth areas. Data were sought and collected on individual site occurrences, both current and historical, of 153 selected species ranging from small and local resident breeding populations and seasonal clusterings to larger metapopulations, overwintering concentrations, migrating groups and anadromous fish runs. These data were analyzed for the entire four-state coastal and estuary study region. Distribution and locality information was collected and compiled at the most detailed scale and format available, generally on 1:24000 standard USGS topographic quadrangle maps. The bulk of this information was obtained from state Natural Heritage Programs and natural resource agencies, Federal agencies (Fish & Wildlife Service, National Marine Fisheries Service) and private conservation organizations, in particular The Nature Conservancy and the National Audubon Society.

Individual occurrences and locations were pinpointed on base maps as precisely as the data would allow, either as point occurrences or larger areal delineations, often to the nearest second of latitude and longitude. This information is currently being entered into a computer-mapping program (MapInfo) to facilitate storage, retrieval and graphic presentation of data. Whenever possible or practical, all occurrences of a species in the study area were recorded, including historical locations, regardless of number of individuals at a site, population size, resident or breeding status or regional or national significance. In some instances, however, particularly in the case of widespread species showing considerable movement over the general area, such as certain waterfowl and fish, only the more stable and regularly-occurring concentrations were mapped.

2) Significant Habitats: Using these species occurrence data, important or potentially important, habitat sites were identified. Subsequent discussions with knowledgeable field biologists and field verification were undertaken to confirm the importance of these sites. In addition to obviously significant and exceptional sites, i.e., those supporting disproportionately large numbers or densities of a species or where breeding success and productivity are particularly high or above average, the data also served to identify important intermediate sites between major areas that function as migration or recruitment "stepping stones".

Prior to this project, many important habitat areas were already recognized for their value to fish and wildlife by various resource agencies and conservation organizations, at least from a statewide perspective, and were recommended to the study project for inclusion in the final report to Congress as significant habitats in need of protection. Because the Northeast Coastal Areas Study focused its data compilation and analysis efforts primarily on habitats of ecoregional, regional or national significance, differences were obviously to be expected between the two perspectives, although these were surprisingly few. In some instances, habitats viewed as significant or important to biologists or natural resource managers in a particular state may not have been felt to have the same significance when viewed in a broader regional context. Conversely, some areas thought to be of lesser value by a state because of their small size were, in fact, determined to be of regional importance as stepping stone areas between major population sites. In other words, candidate sites recommended by the states still needed to be evaluated and analyzed as part of the present study to determine their overall regional or national significance to fish, wildlife and plants in the southern New England - Long Island, NY, study area.

3) Habitat Complexes: The Service also identified significant habitat complexes through analysis of species occurrence data and consultation with others. These larger units generally consist of from two to several individual habitat or landform units that are each of importance to a single species or multiple species and which are either contiguous or in relatively close proximity to each other so as to allow their being recognized as a single, interrelated ecological unit, particularly from a natural resource management perspective. Each of the habitat units will, in many instances, have been individually recognized as being important to either a single species or a group of species, often by an agency or group that is focused on a particular group of species. What the current study attempted to do is identify obvious linkages between significant sites that allow them to be viewed in a much larger and ecologically relevant context. It will be noted that the majority of significant coastal habitat sites identified in this report are primarily habitat complexes comprised of individual, smaller habitat units.

Habitat complexes generally belong to one of three categories:

A. Contiguous, similar habitats, e.g., linear stretches of beaches or dune systems running parallel to the coast, ridgetops or riparian corridors.

B. Contiguous dissimilar habitats, though geomorphologically, and often ecologically, related, e.g., barrier beach/lagoon/salt marsh/upland complexes or local watersheds.

III. METHODOLOGY

A. Delineation of Study Area Boundary:

The House Appropriations Committee described the study area as "...to include, but not be limited to: Long Island Sound, Great Peconic Bay, Rhode Island Sound, Narragansett Bay, Buzzards Bay, Nantucket Sound and the lower Connecticut River." Following this general guidance, the Service determined the study area as encompassing the sounds, bays, estuaries, tidal rivers and adjacent shorelands from Nantucket Sound, including the islands of Monomoy, Nantucket and Martha's Vineyard, to the western terminus of Long Island Sound. (See map, Appendix A.) This area also includes Gardiners and Peconic Bays between the two forks of eastern Long Island, but the Service concluded that it did not include the inner lagoons and bays along the south shore of Long Island that were part of the New York Bight system, even though considerable interest was expressed by several Congressmen from Long Island for this area to be included as part of the study. Because of both lack of funding and time to include these areas, the Service felt it would be more appropriate to conduct a separate study at some later date of significant habitats in the New York Bight area (Montauk Point, NY to Cape May, NJ). It should be noted here that four significant fish and wildlife complexes along the south shore of Long Island have been included in this report, primarily because of the interest and assistance by the National Audubon Society, who largely prepared these specific write-ups. In addition, because of the connection of the New York-New Jersey Harbor to Long Island Sound as well as the excellent report recently prepared by the Trust for Public Land and New York City Audubon Society identifying the value of and threats to this area, a significant heron rookery complex on Staten Island was also included. Other than these sites, no other areas on the south shore have been included and no analysis has been done in this area to determine other areas of significance, of which doubtlessly there are many.

In addition to the immediate coastline, the study area included coastal rivers and streams from their confluence with the estuary up to the limit of tidal influence or fall line. In the specific case of the Connecticut River, the project boundary was determined to extend to the dam at Holyoke, Massachusetts. Due to the resource limitations of this study, however, and the current interest and consideration by Congress of legislation establishing a Connecticut River National Fish and Wildlife Refuge that calls for further study of the river, this study did not focus as much attention on the upper portion of the Connecticut River as it did on the lower tidal reaches. Should the proposed legislation be enacted, the northern, upstream reaches of the river should be carefully explored and evaluated for significant fish, wildlife and plant habitats in a manner similar to the present study.

For the most part, the landward or inland extent of the project's coastal boundary approximates that delineated by the State Coastal Zone Management Programs for New York, Connecticut, Rhode Island and Massachusetts, although in some cases the width of this zone has been broadened to include the estimated inland limit of influence of maritime climate and coastal processes. On the average, the width of this landward coastal zone is about five miles. The seaward extent of the study area is presently delineated by a line drawn from just offshore the southeastern tip of Cape Cod to southeastern Nantucket Island, and from the nearshore waters of Nantucket Island to Montauk Point, Long Island, NY.

B. Coastal Species of Special Emphasis:

The Service's principal approach in identifying significant habitats to be included in the project study area inventory was to focus on those sites of particular regional or national importance to critical life history stages of select coastal species. As an additional part of this process, the Service identified and evaluated areas of significant regional biological diversity and outstanding representatives of regional coastal community types in this same region.

diversity of trust species, a highly vulnerable breeding or spawning area of a fish or bird species that has been substantially reduced or qualitatively degraded from historical times, may all be considered "regionally significant" sites or resources in this report. Periodic re-evaluation of the data and criteria presented will be valuable in maintaining the usefulness of this document.

It is important to note that recommendations for protection that are provided in this report are for planning purposes and do not represent a budgetary commitment, particularly for acquisition, by the Department of the Interior to this project. Any increase above the President's Budget request will need to be offset by corresponding reductions in other projects or programs so that deficit reduction targets can be met. In addition, these areas have not yet been nationally evaluated by the Service in accordance with its Land Acquisition Priority System. Many of the areas identified in this report are already being managed to one degree or another for conservation purposes and are acknowledged here not only for their individual value to fish and wildlife resources but as being part of more extensive habitat complexes requiring a consistent management approach at the ecosystem level.

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APPENDIX A

Application Modifications

Key Map – Northeast Coastal Areas Study

This document involves pipeline location information and is not available at this Internet site due to homeland security-related considerations. This portion of the Islander East consistency appeal administrative record may be reviewed at NOAA's Office of General Counsel for Ocean Services, 1305 East-West Highway, Silver Spring, Maryland.

**NORTHEAST COASTAL AREAS STUDY
U.S. FISH AND WILDLIFE SERVICE**

**SOUTHERN NEW ENGLAND-NEW YORK
COASTAL SPECIES OF SPECIAL EMPHASIS**

The following species have been identified by the U.S. Fish and Wildlife Service's Northeast Estuary Program as being of national or regional significance and of special management concern in the coastal region of southern New England (MA, RI and CT) and New York. Many are species whose populations have declined or are presently declining from historical levels of abundance in the region and/or are especially vulnerable to habitat loss and degradation, disturbance, competition with exotic or nuisance species, overexploitation or environmental contaminants. Some groups, e.g. shellfish and certain finfish, while not especially rare or declining, are of considerable ecological, commercial or recreational importance in the region. The primary purposes of these species lists are to establish a base for identifying habitats in need of protection in the project area and to develop ecoregional strategies for the long-term protection, conservation, and monitoring of both species and habitats.

I. FINFISH: (Spawning areas, nursery and feeding grounds, migration pathways)

Shortnose sturgeon (*Acipenser brevirostrum*) **E**
 Atlantic sturgeon (*Acipenser oxyrinchus*)
 American shad (*Alosa sapidissima*)
 Striped bass (*Morone saxatilis*)
 Atlantic salmon (*Salmo salar*)
 Bluefish (*Pomatomus saltatrix*)
 Winter flounder (*Pseudopleuronectes americanus*)
 Summer flounder, fluke (*Paralichthys dentatus*)
 Weakfish (*Cynoscion regalis*)
 Blackfish, Tautog (*Tautoga onitis*)
 Scup or Porgy (*Stenotomus chrysops*)
 Alewife (*Alosa pseudoharengus*)
 Blueback herring (*Alosa aestivalis*)
 Rainbow smelt (*Osmerus mordax*)
 Menhaden (*Brevoortia tyrannus*)
 American sandlance (*Ammodytes americanus*)
 American eel (*Anguilla rostrata*)
 Bay anchovy (*Anchoa mitchilli*)
 Atlantic silverside (*Menidia menidia*)

E = U.S. Endangered Species

T = U.S. Threatened Species

1, 2 = Category 1 or 2 Candidate Species

II. MARINE/ESTUARINE SHELLFISH: (Major shellfish beds; horseshoe crab spawning areas)

American lobster (*Homarus americanus*)
 Blue crab (*Callinectes sapidus*)
 Horseshoe crab (*Limulus polyphemus*)

American oyster (*Crassostrea virginica*)
Hard-shelled clam or Quahog (*Mercenaria mercenaria*)
Soft-shelled clam (*Mya arenaria*)
Ocean quahog (*Arctica islandica*)
Surf clam (*Spisula solidissima*)
Bay scallop (*Aequipecten irradians*)

III. REPTILES AND AMPHIBIANS: (Nesting, breeding, nursery and feeding areas)

Northern diamondback terrapin (*Malaclemys t. terrapin*) 2

Sea Turtles: (Juvenile concentration areas)

Loggerhead (*Caretta caretta*) T
Green (*Chelonia mydas*) T
Atlantic or Kemp's Ridley (*Lepidochelys kempii*) E
Leatherback (*Dermochelys coriacea*) E

Tiger salamander (*Ambystoma tigrinum*)
Blue-spotted salamander (*Ambystoma laterale*)

IV. BIRDS:

A. Federally Listed/proposed/candidate species and Fish and Wildlife Service species of special management concern:

Roseate tern (*Sterna dougallii*) E
Gull-billed tern (*Sterna nilotica*)
Piping plover (*Charadrius melodus*) T
Northern harrier (*Circus cyaneus*)
Bald eagle (*Haliaeetus leucocephalus*) E
Osprey (*Pandion haliaetus*)
Peregrine falcon (*Falco peregrinus*) E,T
Short-eared owl (*Asio flammeus*)
American bittern (*Botaurus lentiginosus*)
Least bittern (*Ixobrychus exilis*)
Black rail (*Laterallus jamaicensis*)
Seaside sparrow (*Ammodramus maritimus*)
Common barn owl (*Tyto alba*)

B. Migrants: (Wintering concentrations and staging areas; resident breeding populations)

Common loon (*Gavia immer*)
Red-throated loon (*Gavia stellata*)
Horned grebe (*Podiceps auritus*)
Red-necked grebe (*Podiceps grisegena*)
Pied-billed grebe (*Podilymbus podiceps*)
Canada goose (*Branta canadensis*)
Atlantic brant (*Branta bernicla*)
Northern pintail (*Anas acuta*)
American wigeon (*Anas americana*)
Mallard (*Anas platyrhynchos*)
American black duck (*Anas rubripes*)

Gadwall (*Anas strepera*)
Canvasback (*Aythya valisineria*)
Greater scaup (*Aythya marila*)
Lesser scaup (*Aythya affinis*)
Harlequin duck (*Histrionicus histrionicus*)
Common eider (*Somateria mollissima*)
Oldsquaw (*Clangula hyemalis*)
Bufflehead (*Bucephala albeola*)
Common goldeneye (*Bucephala clangula*)
Scoters (*Melanitta fusca*, *M. nigra* and *M. perspicillata*)
Hooded merganser (*Lophodytes cucullatus*)
Red-breasted merganser (*Mergus serrator*)
Clapper rail (*Rallus longirostris*)
Sanderling (*Calidris alba*)
Short-billed dowitcher (*Limnodromus griseus*)
Whimbrel (*Numenius phaeopus*)
Grasshopper sparrow (*Ammodramus savannarum*)

C. Nesting Colonial Waterbirds:

Double-crested cormorant (*Phalacrocorax auritus*)
Little blue heron (*Egretta caerulea*)
Tricolored heron (*Egretta tricolor*)
Great egret (*Casmerodius albus*)
Snowy egret (*Egretta thula*)
Cattle egret (*Bubulcus ibis*)
Black-crowned night-heron (*Nycticorax nycticorax*)
Yellow-crowned night-heron (*Nyctanassa violacea*)
Green-backed heron (*Butorides striatus*)
Glossy ibis (*Plegadis falcinellus*)
American oystercatcher (*Haematopus palliatus*)
Laughing gull (*Larus atricilla*)
Least tern (*Sterna antillarum*)
Common tern (*Sterna hirundo*)
Black skimmer (*Rynchops niger*)

D. Nuisance Species: (Species of particular management concern because of impacts on other species)

Mute swan (*Cygnus olor*)
Herring gull (*Larus argentatus*)
Great black-backed gull (*Larus marinus*)

V. MAMMALS

A. Marine Mammals: (Whale concentration and migration areas; seal pupping and hauling out sites)

Whales:

Minke (*Balaenoptera acutorostrata*)
Fin (*Balaenoptera physalus*) **E**
Humpback (*Megaptera novaeangliae*) **E**
Northern right whale (*Eubalaena glacialis*) **E**

Gray seal (*Halichoerus grypus*)
Harbor seal (*Phoca vitulina*)

Round-fruited false-loosestrife (*Ludwigia sphaerocarpa*)
Climbing fern (*Lygodium palmatum*)
Sea-beach knotweed (*Polygonum glaucum*)
Pondshore knotweed (*Polygonum puritanorum*)
Bald rush (*Psilocarya scirpoides*)
Torrey's mountain-mint (*Pycnanthemum torrei*)
Inundated horned-rush (*Rhynchospora inundata*)
Torrey's beak-rush (*Rhynchospora torreyana*)
Plymouth gentian (*Sabatia kennedyana*)
Quill-leaved arrowhead (*Sagittaria teres*)
Untubercled bulrush (*Scirpus etuberculatus*)
Coast violet (*Viola brittoniana*)

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**SHORELAND AND AQUATIC COASTAL
HABITATS OF SPECIAL EMPHASIS SPECIES
IN SOUTHERN NEW ENGLAND AND NEW YORK**

A. Primary focus of the Northeast Coastal Areas Study is on those breeding/spawning areas, nursery areas, feeding/staging areas, wintering areas and migration pathways of importance to Federal trust species of regional or national significance, particularly those in the following groups:

- Migratory birds
- Anadromous fish
- Endangered species of fish, wildlife and plants (Federally listed, proposed and candidates)
- Marine mammals
- Native species populations on Federal lands
- Recreationally and commercially important species
- Ecologically significant species
- Depredating, nuisance, exotic and potentially invasive species

In addition, other habitats and areas of special emphasis are:

- Areas of significant biological diversity

Outstanding representatives of Regional Coastal Community types

B. Significant Coastal Habitat Types* in Southern New England and Long Island

- Maritime grasslands
- Vegetated tidal wetlands (freshwater and brackish) with contiguous upland buffers
- Sandplain grasslands and heathlands
- Coastal Plain freshwater and brackish ponds
- Pitch Pine/Scrub Oak barrens
- Atlantic White Cedar swamps
- Colonial bird rookeries

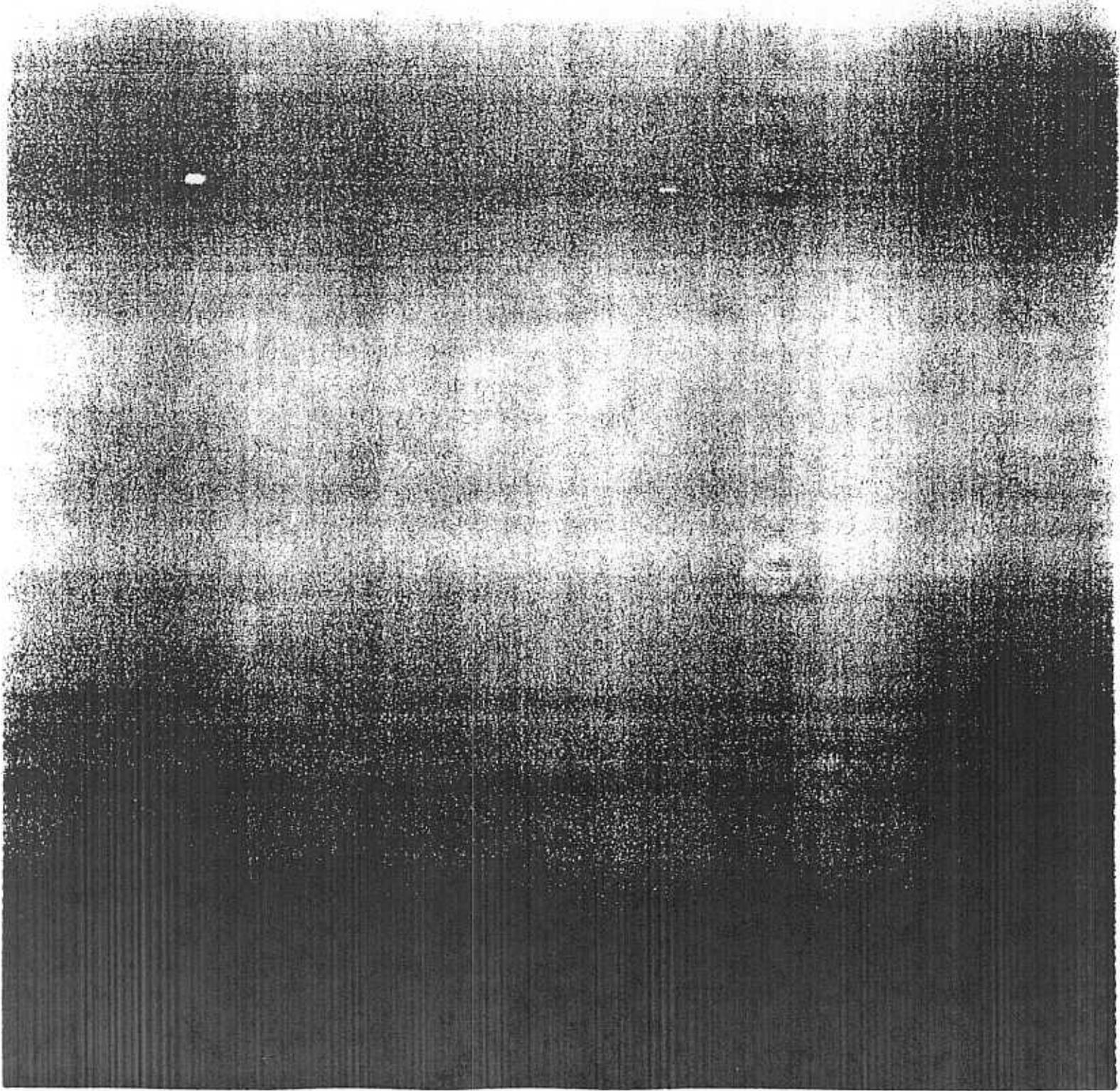
- Intertidal mud and sand flats
- Submerged aquatic vegetation beds
- Relatively undisturbed and free-flowing freshwater coastal streams
- Shellfish beds
- Floodplain forests
- Productive subtidal shoal areas
- Open peatlands
- Marine mammal pupping and hauling out islands (seal islands and rocks)

* Preferred or Important Habitats of Federal Trust Species/Species of Special Emphasis.

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APPENDIX D

Summary of Relevant Applicable Enforceable Policies



APPENDIX D

Summary of Relevant Applicable Enforceable Policies

General Resources

1. *"The general assembly hereby declares that the policy of the state of Connecticut is to conserve, improve and protect its natural resources and environment and to control air, land and water pollution in order to enhance the health, safety and welfare of the people of the state"* C.G.S. section 22a-1 as referenced by C.G.S. section 22a-92(a)(2)

Coastal Waters and Estuarine Embayments

2. *"To manage estuarine embayments so as to insure that coastal uses proceed in a manner that assures sustained biological productivity, the maintenance of healthy marine populations and the maintenance of essential patterns of circulation, drainage and basin configuration"* CGS section 22a-92(c)(2)(A)

Islands

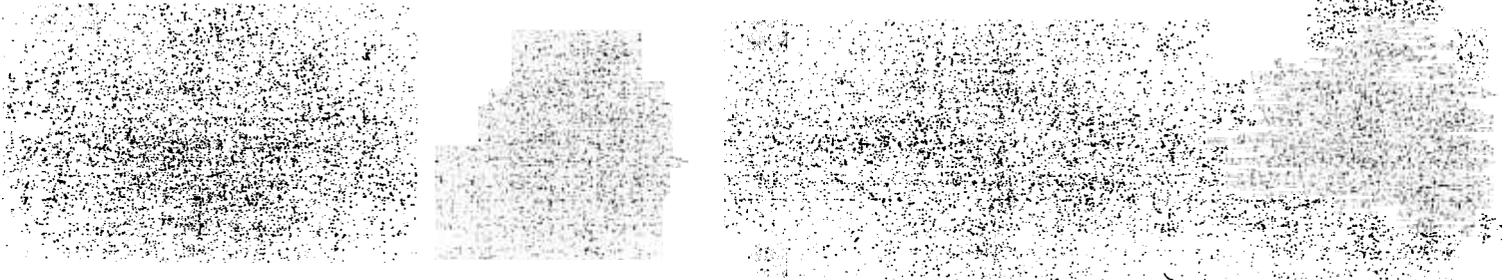
3. *"To manage undeveloped islands in order to promote their use as critical habitats for those bird, plant and animal species which are indigenous to such islands or which are increasingly rare on the mainland"* CGS section 22a-92(b)(2)(H)
4. *"To maintain the value of undeveloped islands as a major source of recreational open space"* CGS section 22a-92(b)(2)(H)
5. *"To disallow uses which will have significant adverse impacts on islands or their resource components"* CGS section 22a-92(b)(2)(H)

Rocky Shorefront

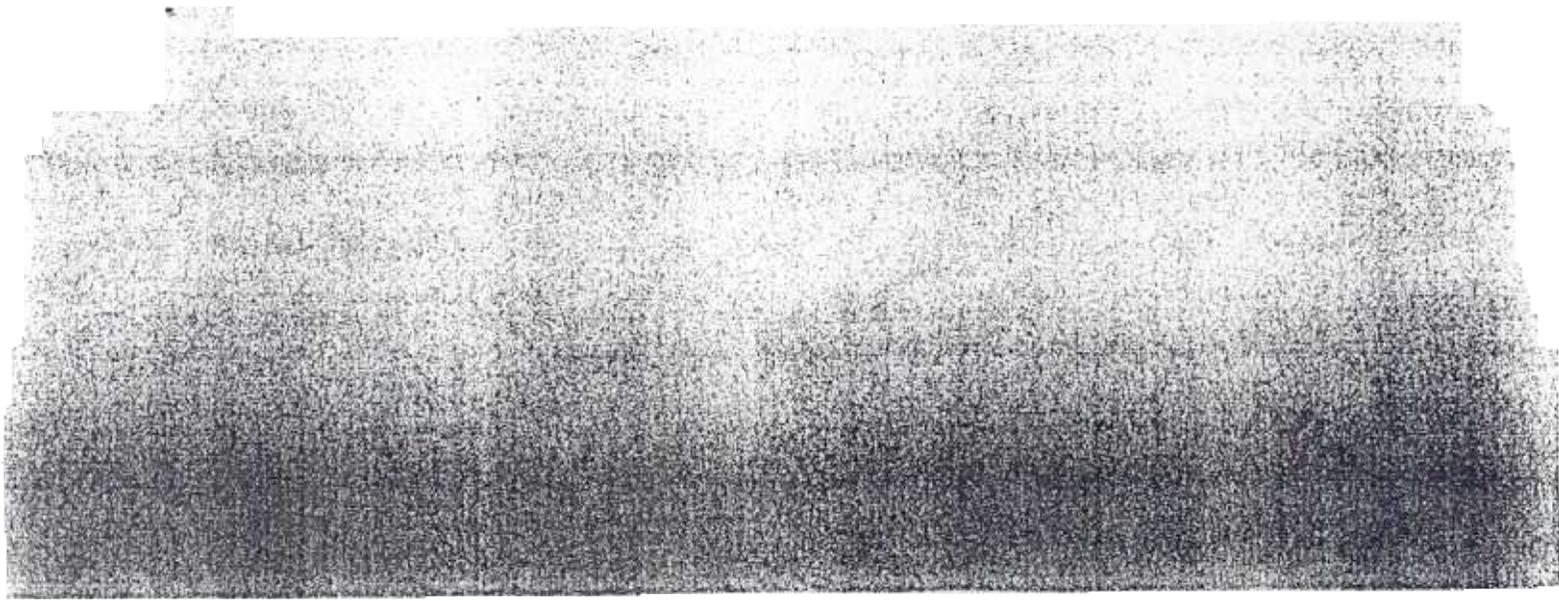
6. *"To manage rocky shorefronts so as to insure that the development proceeds in a manner which does not irreparably reduce the capability of the system to support a healthy*

APPENDIX E

Shellfishing Area Classifications



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Appendix E – Shellfishing Area Classifications

This document involves pipeline location information and is not available at this Internet site due to homeland security-related considerations. This portion of the Islander East consistency appeal administrative record may be reviewed at NOAA's Office of General Counsel for Ocean Services, 1305 East-West Highway, Silver Spring, Maryland.

APPENDIX F

June 4, 2003 NOAA Comments

[REDACTED]

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UNITED STATES DEPARTMENT OF COMMERCE
 National Oceanic and Atmospheric Administration
 NATIONAL MARINE FISHERIES SERVICE
 1315 East-West Highway
 Silver Spring, Maryland 20910
 THE DIRECTOR

JUN - 4 2003

MEMORANDUM FOR: Brandon Blum
 Office of General Counsel for Ocean Services

FROM: *R. Lead*
 for William T. Hogarth, Ph.D.

SUBJECT: Islander East Pipeline Company Consistency Appeal

I am responding to the memorandum from the former Deputy Under Secretary for Oceans and Atmosphere, Mr. Scott Gudes, regarding a Department of Commerce administrative appeal by the Islander East Pipeline Company (Islander East or appellant) pursuant to the Coastal Zone Management Act (CZMA). The appeal petitions the Secretary for an override of the State of Connecticut's objection to Islander East's proposed natural gas pipeline. The pipeline would extend from a connection with an existing natural gas infrastructure near North Haven, Connecticut across and beneath the waters of Long Island Sound (the Sound) connecting to an inland terminus at Brookhaven, Long Island, New York. The State of Connecticut has determined that the proposed action would adversely impact natural resources, land and water uses in their coastal zone beyond acceptable levels. In his January 31, 2003 memo, Mr. Gudes asked NOAA's National Marine Fisheries Service (NOAA Fisheries) to provide comments on the Islander East appeal. We are responding to those substantive grounds as they relate to our mandate to protect, manage, and restore the nation's fishery resources. We are unable to provide comments on the procedural grounds of timing of communications or national security interest.

Based on our understanding of the proposed action and the specifications contained within Mr. Gudes' memo, the State of Connecticut decision raises important concerns with respect to the environmental impact of the proposal. Portions of the pipeline route transit ecologically sensitive areas of importance to the state and nation, and there is a likelihood of incurring significant adverse environmental impacts during pipeline installation. There are reasonable alternative alignments, and we have identified less destructive installation methodologies and procedures, both of which would significantly lessen adverse impacts on natural resource, while advancing the appellant's objectives.

NOAA Fisheries' Comments on the Issues being Considered in the Appeal

For the Secretary to find for the appellant, he must determine that the project satisfies two substantive grounds. The first is that the project is "consistent with the objectives" of the CZMA. This ground is subdivided into three interrelated items. The Secretary must find that the pipeline 1) furthers the national interest as articulated in sections 302 or 303 of the CZMA in a



22. Wildlife, Finfish, Shellfish Habitat: Degrading or destroying essential wildlife, finfish or shellfish habitat through significant alteration of the composition, migration patterns, distribution, breeding or other population characteristics of the natural species or significant alteration of the natural components of the habitat. CGS section 22a-93 (15)(G)

- B. Terrestrial Mammals:** (Island endemics-Some of dubious taxonomic status)
- Martha's Vineyard short-tailed shrew (*Blarina brevicauda longa*) 2
 - Nantucket short-tailed shrew (*Blarina brevicauda compacta*) 2
 - Small-footed myotis (*Myotis leibii*) 2
 - Monomoy white-footed mouse (*Peromyscus leucopus ammodytes*) 2
 - Martha's Vineyard white-footed mouse (*Peromyscus leucopus fuscus*) 2
 - Block Island meadow vole (*Microtus pennsylvanicus propectus*) 2
 - Beach or Muskeget Island vole (*Microtus breweri*) 2

VI. INVERTEBRATES:

- American burying beetle (*Nicrophorus americanus*) E
- Northeastern beach tiger beetle (*Cincindela d. dorsalis*) T
- Puritan tiger beetle (*Cincindela puritana*) T
- Decodon borer moth (*Papaipema sulphurata*) 2
- Banded bog skimmer dragonfly (*Williamsonia lintneri*) 2
- Lemmer's noctuid moth (*Lithophane lemmeri*) 2
- Regal fritillary butterfly (*Speyeria idalia*) 2
- Barrens bluets damselfly (*Enallagma recurvatum*)
- Lateral bluets damselfly (*Enallagma laterale*)
- Hessel's hairstreak (*Mitouri hesseli*)
- Barrens buckmoth (*Hemileuca maia*)
- Dwarf wedge mussel (*Alasmidonta heterodon*) E

VII. PLANTS:

A. Federally Listed:

- Sandplain gerardia (*Agalinis acuta*) E

B. Federal Candidates:

- Sea-beach pigweed (*Amaranthus pumilis*) 2
- Nantucket serviceberry (*Amelanchier nantucketensis*) 2
- Variable sedge (*Carex polymorpha*) 2
- Spreading Tick-trefoil (*Desmodium humifusum*) 2
- New England boneset (*Eupatorium leucolepis* var. *novae-angliae*) 2
- Pine Barrens boneset (*Eupatorium resinosum*) 2
- New England blazing-star (*Liatris borealis*) 2
- Graves' beach plum (*Prunus maritima* var. *gravesii*) 2
- Chaffseed (*Schwalbea americana*) 1
- Long's bulrush (*Scirpus longii*) 2

C. Regional Species of Special Concern:

- Annual peanut-grass (*Amphicarpum purshii*)
- Eastern silvery aster (*Aster concolor*)
- Bicknell's hawthorn (*Crataegus bicknellii*)
- Sessile-leaved tick-trefoil (*Desmodium sessilifolium*)
- Saltpond grass (*Diplachne maritima*)
- Three-angled spike-sedge (*Eleocharis tricostata*)
- Parker's pipewort (*Eriocaulon parkeri*)
- Bushy rockrose (*Helianthemum dumosum*)
- Creeping St. John's-wort (*Hypericum adpressum*)

significant or substantial manner; 2) outweighs the national interest associated with the activity's adverse coastal effects, when those effects are considered separately or cumulatively; and 3) has no reasonable alternatives that could be conducted in a manner consistent with the enforceable policies of the State of Connecticut's Coastal Zone Management Program.

The second substantive ground for overriding a state's objection is whether the proposed activity is necessary in the interest of national security. The Secretary must find that a national defense or other national security interest would be significantly impaired if the activity in question was not permitted to go forward as proposed.

Islander East Company proposes a pipeline project in the shoal waters of Connecticut to dredge a trench and to store the removed sediment "in-water," immediately adjacent to the excavation. Within that 1.8 km (1.1 mile) long trench area and adjacent seafloor, as well as offshore to the 15 meter isobath, immediate and protracted destabilization of the seafloor will be incurred. The project construction footprint encompasses an area of 1,270 hectares (5 square miles). The sediments in the project area are mostly composed of fine particles that are tightly consolidated in an undisturbed state. When disturbed, however, as through dredging, they become very loosely consolidated and easily resuspended into the water column (Tavolaro, 1984). Wave energy is strong enough to disperse these destabilized, excavated sediments, and may result in continued impacts on nearby sea floor habitats. The physical displacement of the existing habitat and hydration of the sediment will diminish or exclude resource use for relatively long periods of time. Evidence of this from the Hudson River collected from benthic profiling performed by LaMont-Doherty Geological Observatory for the State of New York (*New York State Department of Environmental Conservation 2003*) indicates that other utility crossings, undertaken in the Hudson even decades ago, continue to have discernible adverse impacts on the aquatic resources in the project alignments. As a specific example, benthic profiling of a water line installation between Newburgh and Wappinger in 1974 indicates that the site has not fully recovered to preconstruction conditions. Thus, sediment dispersal and acute adverse habitat degradation from the Islander East proposed construction will affect habitat function for long periods. FERC's *Islander East Pipeline Project FEIS (2002)* states on page 5-5 that, "Based on a review of sea floor recovery rates and analysis of existing conditions, most disturbed benthic communities would be expected to recover within 5 years." However, the document further states, "...disruption of nearshore Connecticut shellfish habitat and deep anchor pits or depressions created by construction could take longer to recover and in some cases may develop different benthic communities." This indicates that shellfish habitat may take much longer than five years to recover and may never fully recover to pre-existing use condition for these resources. Moreover, hydrated sediment is too fluid to support the weight of adult clams, the size and weight of which is dependent on the consistency of the sediment. As settled clams grow and gain weight, they may sink deep enough into these sediments and smother as oxygen depletes (Wilber and Clarke 2001). The nature and persistence of these physical impacts were deemed by the state to be inconsistent with 14 enforceable policies of the Connecticut CZMP (Connecticut DEP letter to Islander East Co., 2002).

As presently proposed, the 1,270 hectares of pipe laying and multiple pass, plowing, and backfill programs would physically and adversely impact the Long Island Sound seabed, and would disperse significant volumes of resuspended sediment onto nearby spawning, nursery, and maturation habitats for finfish, mollusks, and crustaceans. Suspended sediments have been shown to degrade habitat functions and values and exclude motile species (Wilbur and Clarke 2001; Limburg *et. al.* 1999; Benfield and Minello 1996; Johnson and Wildish 1982). Connecticut DEP has concluded that those actions would be inconsistent with ten enforceable policies of their CZMP (Connecticut DEP letter to Islander East Co., 2002). These impacts also have national interest implications regarding fishery resources which are managed by NOAA Fisheries, either solely or jointly with the State of Connecticut. Although the State of Connecticut's consistency determination focused on lobsters and quabogs, the New England Fishery Management Council and the Mid Atlantic Fishery Management Council did designate the project area as essential fish habitat for as many as 23 aquatic species managed under the Magnuson-Stevens Fishery Conservation and Management Act. This is an important consideration for NOAA Fisheries as the project could affect habitats used by these species.

NOAA Fisheries' communications to FERC and the Army Corps of Engineers (ACOE) present similar arguments regarding the proposed pipeline. Discussions among the appellant and the regulatory agencies indicated significant, unacceptable, and avoidable individual and cumulative adverse impacts associated with the project. NOAA Fisheries has expressed these conclusions and their justification to both FERC on May 20, 2002, during their National Environmental Policy Act review process (FERC/EIS - 0143F), and to the ACOE, New England District, on July 3, 2002 in response to their public notice for this project. Those impacts were characterized as two principal types--removal or burial of both resource and habitat within the actual construction corridor, and intensified suspended sediment-induced impacts in the far-field. Both impact types have been shown to be associated with the pipe installation methodologies proposed by Islander East and are destructive to habitats and resources of concern to NOAA Fisheries.

Many of the adverse impacts associated with the proposed pipeline relate to the installation techniques proposed by the appellant. As noted above, NOAA Fisheries has identified that the impact area contains both species and habitats managed under the Magnuson-Stevens Fishery Conservation and Management Act as well as the Fish and Wildlife Coordination Act, and that those resources would be adversely impacted by the pipeline installation. The present design calls for the creation of open trenches and pits with adjacent, in-water storage of the excavated material and subtidal discharge of drilling mud and its contents in water depths where simple pipe laying and burial procedures cannot be employed (waters < 7 meters). In waters deeper than 7 meters, the project calls for a total of four passes of the installation and burial equipment along the remainder of the approximately 32-kilometer underwater section between Branford, CT and Wading River, NY. Both the inshore and offshore activities will result in seabed disruptions that have been characterized by the appellant as adversely impacting approximately 1,274 hectares.

Additional impacts are created by the proposed lay barge mooring and positioning system which will require approximately 70 anchor placements per kilometer. These habitat displacements and

dispersion of sediment created by the anchoring procedures are seen as pits and fluidized sediments. Habitat found in waters deeper than 15 meters are more stable (i.e., less influenced by natural disturbance events) than those in shallower waters. Because of that stability, disturbance in deeper waters usually result in protracted damage to such habitat, perhaps much longer than five years (SAIC 1995). Pits created by anchor placements, particularly of the size used for pipe laying, can capture organic materials and semi-motile species creating hypoxic or anoxic traps incapable of supporting benthic organisms. (Bohlen, Cohen and Strobel 1992). Hydrated sediments are incapable of providing support for molluscan organisms that can grow as heavy as northern quahog or surf clams. Eventually, these molluscs sink in the unstable sediment, and without contact with the overlying oxygenated waters, they suffocate (Hirsch, Disalvo and Peddicord 1978). Because much of the central Sound floor is composed of fine grained materials, sediment reconsolidation will be protracted. Near bottom turbidity in such depths diminishes efficient feeding by aquatic resources and may inhibit both spawning and hatching success by exhausting resources needed for gonadal development and by suffocating released gametes (Wilbur and Clarke 2001).

In determining whether the national interest of the proposed pipeline outweighs the adverse coastal effects, either separately or cumulatively, we note that there are several other natural gas pipeline and energy transmission interconnection proposals seeking access to the same market. Other proposals, such as the Iroquois Eastern Long Island Extension Project, as mentioned in the Islander East FEIS, have significantly fewer and smaller individual and cumulative impacts associated with their design than those found in the Islander East proposal. Further, the State of Connecticut has authorized the placement of utility structures in their coastal zone, indicating that some proposals can comply with the Connecticut Coastal Zone Policies. FERC identified and discussed a number of alignment and system alternatives in their final environmental impact statement (FERC/EIS-0143F 2002), and concluded on page 4-3 that an Eastern Long Island (ELI) system alternative is more environmentally benign than the appellant's. NOAA Fisheries has recommended that the appellant employ such alternative alignments and identified less destructive installation methodologies that would reduce further local and regional adverse impacts. Selection of an alignment with fewer shellfish resources, elimination of the trenching, and reduction in the number of plow and backfill passes are alternatives that would greatly reduce the adverse impacts associated with the Islander East proposal.

Finally, we note that Islander East and the principal regulatory agencies (State of Connecticut and federal) are involved in technical discussions, concurrent with this appeal process, regarding designs and practices that could greatly reduce the adverse impacts associated with the present proposal. The Coastal Zone Management Act, Federal Consistency Regulations (15 C.F.R. Part 930) Sections 930.129(b), (c) and (d) provide for those discussions.

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APPENDIX G

May 27, 2003 Letter From Islander East

[REDACTED]

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May 27, 2003

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MAY 28 2003

DEP OFFICE OF
LONG ISLAND SOUND PROGRAMS

Mr. Charles H. Evans
Director
Office of Long Island Sound Programs
State of Connecticut
Department of Environmental Protection
79 Elm Street
Hartford, Connecticut 06106-5127

Re: Islander East Pipeline Project – Water Quality Certificate App. #200300937

Dear Mr. Evans:

We are in receipt of your letter dated May 5, 2003. Your letter comments on the completeness of the application filed by Islander East Pipeline Company, LLC ("Islander East") for a water quality certification pursuant to section 401 of the Federal Water Pollution Control Act ("Water Quality Certification"). It also addresses Islander East's request for a determination that the Islander East pipeline project is consistent with Connecticut's coastal zone management plans ("CZM Determination") and Islander East's pending application for a Tidal Wetlands and Structures & Dredging Permit ("TWSD Permit"). You refer to these three matters as if they were part of a single process. The three applications, however, represent three legally distinct matters and, in Islander East's view, cannot appropriately be treated on a consolidated basis for all purposes. Islander East's response to your letter with respect to each of the three matters is set forth herein.

CZM Determination: As you are aware, the CZM Determination is currently the subject of a proceeding pending before the U.S. Secretary of Commerce ("Secretary"). On May 15, 2003, Islander East filed with the Secretary a request that the proceeding be remanded to the Connecticut Department of Environmental Protection ("DEP") for a period to end no later than July 31, 2003. The request for remand is predicated on the fact that Islander East has proposed additional mitigation measures and provided supplemental data which Islander East believes should be considered by the DEP and made a part of the decisional record. The request for remand is intended to facilitate the resolution of outstanding issues with the DEP, so that the Secretary is not burdened with the appeal. By letter dated May 23, 2003, the DEP notified NOAA that it did not object to Islander East's request. On remand, further processing of Islander East's application by DEP will be governed by applicable federal law and the federal regulations set forth at 15 C.F.R §930.129 which require, *inter alia*, that the Secretary, in remanding an appeal, shall "determine a time period for the remand to the State not to exceed three months." Islander East urges the DEP to issue a coastal zone

consistency determination within the time period established by the Secretary in the remand order.

Islander East is aware that the Connecticut Legislature has pending before it a proposal to extend beyond June 3, 2003 the current moratorium ("Moratorium") on issuance of permits for construction in Long Island Sound. Even if the Moratorium is extended, it is Islander East's view that the DEP must still act on Islander East's application within the period established by the Secretary, because such action is required by the federal law from which the DEP's authority to act is derived, and no state moratorium can vary that federal requirement.

Water Quality Certification At the outset, we would remind you that Islander East's Section 401 application has been pending with the DEP since February 13, 2002, well over a year. On March 13, 2003, after consultation with the DEP Staff, Islander East refiled its Section 401 application in order to accommodate DEP's request for additional time to consider modified offshore construction techniques developed after detailed discussions with DEP Staff. Your May 5 letter now seeks to continue the process of requiring new information and new proposals from Islander East, in complete disregard of the processes which have been under way at the DEP for well over a year and contrary to the understanding which led to the refile on March 13, 2003.

Your May 5 letter treats the Section 401 Water Quality Certification as if it is a siting process, which it clearly is not. Indeed, your statement that Islander East must, as part of that process, "fully evaluate alternatives and provide a compelling demonstration that there are no feasible alignments that could further minimize adverse impacts" because "the Department can only authorize that alternative with the least impact" is completely at odds with the law.

The Clean Water Act "establishes distinct roles for the Federal and State Governments."¹ "Although § 401(d) authorizes the State to place restrictions on the activity as a whole, that authority is not unbounded. The State can only ensure that the project complies with 'any applicable effluent limitations and other limitations, under [33 U.S.C. §§ 1311, 1312]' or certain other provisions of the Act, 'and with any other appropriate requirement of State law.'"² Thus, the purpose of the Water Quality Certification is to permit the State, acting reasonably, to determine whether a

¹ *PUD No. 1 of Jefferson County v. Washington Dep't of Ecology*, 511 U.S. 700, 704 (1994).

² *Id.* at 712 (citing 33 U.S.C. § 1341(d)). See *Summit Hydropower v. Comm'r of Envtl. Prot., et al.*, 7 Conn. 95 (Conn. Super. Ct. 1992), *rev'd on other grounds*, 226 Conn. 792, 629 A.2d 367 (1993). In *PUD No. 1*, the Court acknowledged that § 401(d)'s reference to other "appropriate requirement of State law" would cover a state's imposition of limitations to ensure compliance with state water quality standards, but refused to speculate "on what additional state laws, if any, might be incorporated by this language." *PUD No. 1*, 511 U.S. at 713.

“discharge” resulting from a federally licensed activity complies with State water quality standards.

Here, the “discharge” to be evaluated by the state is the discharge that will result from the construction and operation of the Islander East pipeline *as authorized by FERC, utilizing the route certificated by FERC*. The federal delegation of authority under the Clean Water Act does not include any authorization to conduct a project alternative analysis. Further, while the state is authorized to condition a certification upon the applicant’s compliance with an “appropriate requirement of State law,” requiring the use of a different route than that certified by FERC could not possibly be an “appropriate” State requirement. The FERC has exclusive jurisdiction over these matters to the exclusion of the states.³ The State’s desire to evaluate alternatives to the Islander East pipeline project which would materially deviate from the FERC-certificated route clearly exceeds the authority available to it under Section 401. In short, the Section 401 process is not a forum for the state to revisit the “extensive analysis of the project as required by the [NGA] and other statutes”⁴ that was conducted by FERC. As explained in the FERC Letter, FERC’s analysis of the Islander East project:

included an exhaustive study of the project’s environmental impacts as required by the National Environmental Policy Act and other environmental statutes; this analysis focused in particular on the impact the proposed project will have on Long Island Sound . . . this analysis, which was subject to review and comment by local, state and federal agencies, the public and other entities, concluded that the project would have acceptable environmental impacts, including the crossing in Long Island Sound.

[t]he environmental impacts associated with the Sound water crossing have been fully and carefully reviewed by the Commission in a public process and have been found to be acceptable. While we are mindful that the development and construction of pipeline facilities present significant environmental challenges, the Commission must balance these considerations with its overriding responsibility under the NGA to ensure the timely development of an adequate, reliable energy infrastructure.

The project will contribute to Long Island’s energy security, a particularly vital national consideration at the present time. The Islander East Project will also increase the diversity of available pipeline transportation options and access to supply sources and

³ *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293 (1988); *National Fuel Gas Supply Corp. v. Pub. Serv. Comm’n.*, 894 F.2d 571 (2nd Cir. 1990), *cert. denied*, 110 S. Ct. 3240 (1990).

⁴ *Letter from Pat Wood, III, Chairman of the FERC, to Mr. Scott Gudes, Deputy Under Secretary for Oceans and Atmosphere, United States Department of Commerce, March 11, 2003 (“FERC Letter”).*

introduce pipeline-to-pipeline competition into eastern Long Island for the first time. Moreover, the pipeline will increase overall regional infrastructure reliability and offer an additional source of outage protection to an area which is currently served mainly by one source of supply.⁵

FERC analyzed, and rejected, the alternatives on which the DEP now seeks to focus. FERC explained that:

In certificate proceedings, the Commission's primary responsibility under the NGA is to determine if the proposed facilities are required by the public convenience and necessity. The term public convenience and necessity connotes a flexible balancing process, in the course of which all the factors are weighed prior to final determination. The Commission's obligation is to weigh all relevant factors in exercising its responsibilities under the NGA. A flat rule making one factor dispositive in the certificate decision is contrary to the Commission's responsibility to consider and balance all relevant factors. Thus, although the final EIS finds, solely from an environmental standpoint, that the ELI System Alternative is the preferred environmental alternative to Islander East's proposal, that factor is not the end of our inquiry into the public convenience and necessity.

The proposed Islander East and Algonquin Projects increase the flexibility and reliability of the interstate pipeline grid by offering greater access to gas supply sources with increased availability of gas for anticipated electric generation projects. Further, it will introduce pipeline-to-pipeline competition to Eastern Long Island markets. In approving the proposed pipeline, the Commission also reviewed the precedent agreements filed by Islander East and various market studies to determine that there was sufficient long and short-term market demand to support the proposed project. Additionally, . . . the Commission determined that the proposed Islander East Project is consistent with the Policy Statement's criteria.

The Commission also reviewed the filings made by Islander East's proposed customers and the New York PSC emphasizing the need for a totally separate sound crossing to provide contingency protection for both gas and electric systems against a total loss of supply if damage were to occur to the Iroquois line.

⁵ *Id.*

Accordingly, after taking the hard look required by NEPA, the Commission concluded, under the NGA, that the other values of the proposed project outweighed what the final EIS described as the project's limited, but acceptable, environmental costs. As such, it determined that, under the NGA, it was required by the public convenience and necessity to approve the Islander East Project.⁶

Thus, the FERC has already conducted the analysis that the State seeks to conduct under the auspices of Section 401. A further, duplicative review by the State is both outside the State's authority under Section 401 and is clearly preempted by the NGA.⁷ Moreover, FERC notified the DEP and twelve of its administrative subdivisions, including the Office of Long Island Sound Programs, of the preparation of the DEIS and the FEIS for this project, and invited them to comment on those documents and to intervene in the underlying FERC certificate proceeding.⁸ The DEIS and FEIS specifically addressed the issues of alternative projects and alignments, and, as part of its certificate order, FERC reviewed and considered all alternative projects and alignments presented to it and approved the current pipeline alignment for the project. The DEP did not timely intervene, and FERC denied the DEP's request for late intervention on a petition for rehearing. FERC approval and denial of rehearing on these issues, as well as others that could or should have been raised before FERC is

⁶ *Islander East Pipeline Co., et al.*, 102 FERC ¶61,054 (2003) at ¶5.

⁷ See *Niagara Mohawk Power Corp. v. N.Y. Dep't of Envtl. Conservation*, 592 N.Y.S.2d 141 (App. Div.) (allowing state laws to be conditioned on compliance with other "appropriate" state laws begs the question as to which laws are "appropriate"; here the agency seeks to consider provisions of state law that address the very matters reserved by the Federal Power Act for determination at the federal level, e.g., dam safety, general balancing of economic and other concerns); *aff'd*, 624 N.E.2d 146, 147, 150 (N.Y. 1993) (New York Department of Environmental Conservation's effort to broaden the scope of its review under the Clean Water Act to include aspects of ECL article 15 is unfounded), *cert. denied*, 511 U.S. 1141 (1994); *Matter of the Power Auth. of New York v. Williams*, 457 N.E.2d 726, 730 (N.Y. 1983) (state agency cannot balance the need for a project against its environmental impact); *Matter of de Rham v. Diamond*, 295 N.E.2d 763, 768 (N.Y. 1973) (state agency has neither the authority nor duty to delve into many other issues that had been investigated and decided by the Federal Power Commission in the course of extensive proceedings, e.g., the safety of the aqueduct and the appearance of the shoreline). Nor does the State have the authority to conduct a further review of alternatives in the context of the TWSD Permit or the CZM Determination, because, again, the State's authority in this area is preempted by the NGA. As to the applicability of cases decided under the Federal Power Act, 16 USC §791a *et seq.* to those governed by the NGA, the Supreme Court has held that similar provisions in the two statutes may be construed in similar fashion. *Arkansas Louisiana Gas Co. v. Hall*, 453 U.S. 571, 578n.7 (1981).

⁸ See Exhibit A to the DEIS and the FEIS.

binding on the DEP.⁹ Absent a stay, the FERC certificate order remains binding and effective even if a petition for rehearing and a judicial appeal is filed under NGA § 19.¹⁰ No stay of the FERC Certificate order has been issued by FERC or any Court, thus the DEP is precluded from reconsideration of project alternative and alignment issues.

Islander East takes this opportunity to note that, notwithstanding FERC's finding that construction of its pipeline facilities along the FERC-certificated route and utilizing the FERC-mandated mitigation measures is environmentally acceptable, Islander East has offered to perform additional mitigation measures beyond those required by FERC in order to meet the expressed concerns of the DEP. Data supporting these additional measures have already been provided to the DEP.

TWSD Permit: It is Islander East's earnest desire to cooperate with the State in applying for and obtaining a TWSD permit, and Islander East has taken every possible step to do so to date. However, it is also Islander East's position that the requirement to obtain a TWSD permit is subject to the preemptive effect of the NGA and the FERC Certificate. A long line of judicial precedent establishes that the NGA and the regulations promulgated by FERC thereunder prevent State and local agencies, through application of State and local laws, from prohibiting or unreasonably delaying the construction or operation of FERC-approved facilities.¹¹ It is also Islander East's position that the Moratorium, if extended and applied to Islander East, runs afoul of the Commerce Clause of the United States Constitution.

Accordingly, if the DEP elects to deny the permit, to decline to act on it by reason of the Moratorium, or to condition its issuance on payment of an excessive processing fee, Islander East's intention is to proceed under the authority of its federal authorizations.¹²

Conclusion: Time is of the essence with respect to the matters addressed in this letter. This project has already been delayed a full year from its intended schedule. Islander East now must construct its pipeline facilities and place them in operation by November 1, 2004, in order to meet the requirements of the market. This will require Islander East to commence construction by early Fall 2003. Islander East urges the State to cooperate in achieving that schedule, failing which Islander East will pursue its rights and remedies under federal law in order to make that schedule a reality.

⁹ See *City of Tacoma v. Taxpayers of Tacoma*, 357 U.S. 320, 335-340 (1958), *Williams Natural Gas Co. v. Oklahoma City*, 890 F.2d 255 (10th Cir. 1989), *cert. denied*, 497 U.S. 1003 (1990).

¹⁰ See *e.g.*, *Ecee, Inc. v. FPC*, 526 F.2d 1270, 1274 (5th Cir.), *cert. denied*, 429 U.S. 867 (1976), *Louisiana v. FPC*, 483 F.2d 972, 973 (5th Cir. 1973).

¹¹ *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293 (1988); *National Fuel Gas Supply Corp. v. Public Service Comm'n.*, 894 F.2d 571 (2nd Cir. 1990), *cert. denied*, 110 S. Ct. 3240 (1990).

¹² *Nat'l Fuel Gas Supply Corp. v. Pub. Serv. Comm'n.*, 894 F.2d 571 (2nd Cir. 1990), *cert. denied*, 110 S.Ct. 3240 (1990).

Mr. Charles H. Evans
May 27, 2003
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Notwithstanding that the DEP's request for information concerning project alternatives and alternative routes is beyond the scope of its authority under the Clean Water Act, Islander East is providing herewith for your convenience certain materials relating to alternatives that were submitted to, and evaluated by, FERC in its analysis of alternatives. This material may be considered responsive to paragraphs 1-7 of the Addendum to your letter. Islander East is, in addition, providing herewith the technical responses and data in response to paragraphs 8-28 of the Addendum.

We will contact you shortly to establish a meeting in early June to review our responses with you.

Sincerely,

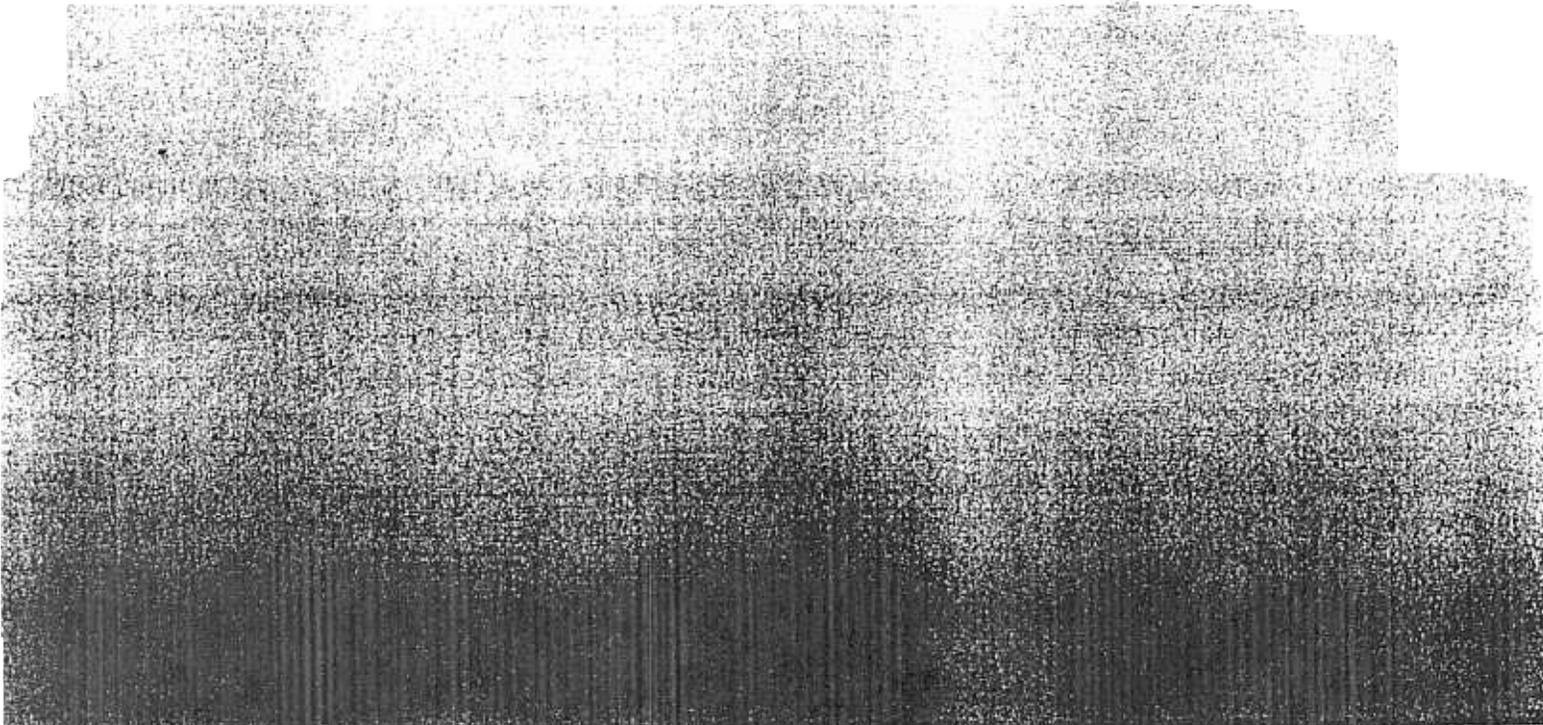
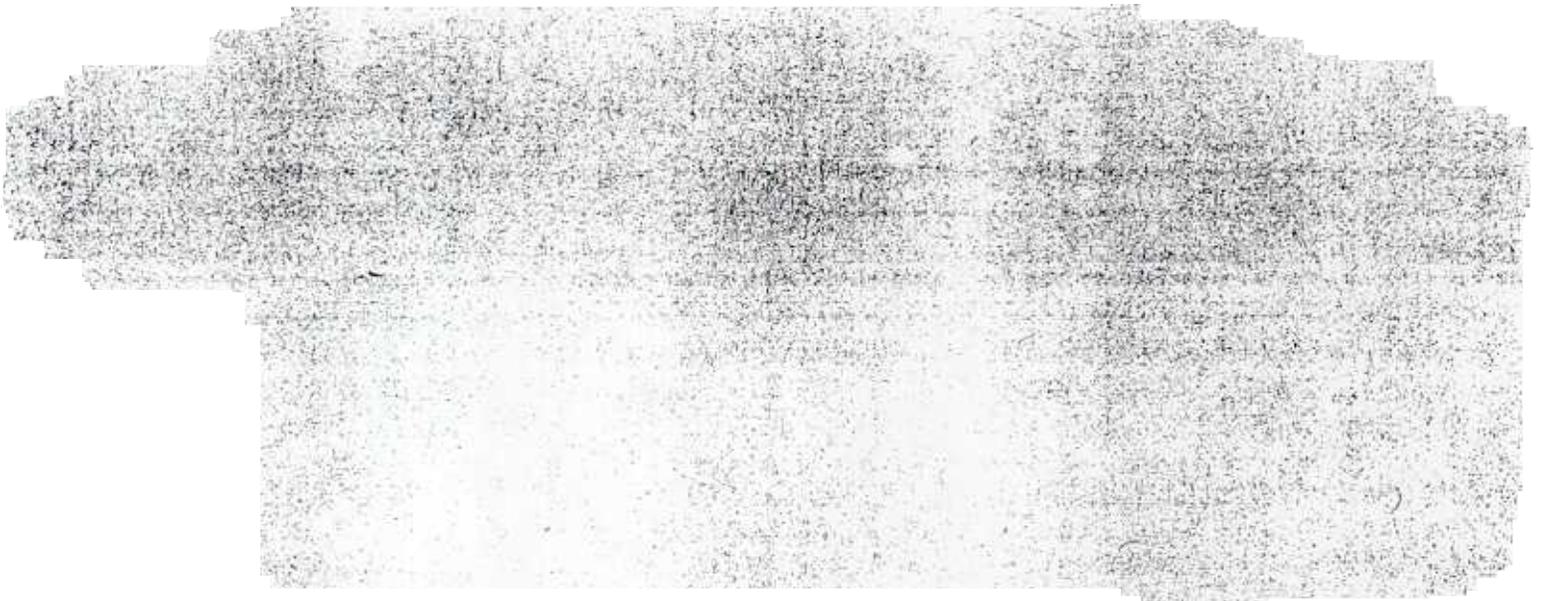


Gene H. Muhlherr

cc: Cori Rose, U.S. Army Corps of Engineers
Mike Ludwig, National Marine Fisheries Service
David Carey, Department of Agriculture / Bureau of Aquaculture
Joanne Wachholder, Federal Energy Regulatory Commission
Michael Marsh, US Environmental Protection Agency

APPENDIX H

July 9 2003 letter from CT Attorney General



CF
SJ

RICHARD BLUMENTHAL
ATTORNEY GENERAL



55 Elm Street
P.O. Box 120
Hartford, CT 06141-0120

Office of The Attorney General
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July 9, 2003

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DEP OFFICE OF
LONG ISLAND SOUND PROGRAMS

Mr. Charles Evans
Office of Long Island Sound Program
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106

Dear Mr. Evans:

I have been informed that the Office of Long Island Sound Programs ("OLISP") is reviewing the application of Islander East Pipeline Company, LLC ("Islander East") for a certificate of consistency with the Council Zone Management Act ("CZMA"). I understand that this evaluation is prompted by a review from the United States Department of Commerce ("Commerce"). Specifically, Islander East filed a CZMA application which was denied on October 15, 2002, which denial was subsequently appealed, pursuant to federal law, to the Department of Commerce. During the pendency of this appeal, a sufficient number of amendments were made to the original plan that a remand was necessary to permit OLISP to reconsider the matter.

I am writing to offer my comments on the Islander East proposal relative to the CZMA process and provide OLISP with information that may be helpful in its administrative review.

Background

1. The Project.

As you are aware, Islander East proposes to build a 50-mile long interstate natural gas pipeline creating an additional link between the Connecticut and Long Island markets. Approximately 19 miles of the pipeline would be constructed under the Long Island Sound.

As described in the company's literature, the purpose of the project is to provide 285,000 dekatherms per day (Dth/d) of natural gas to Long Island, enough to heat about 600,000 homes. This description of the project's purpose is repeated in the Environmental Impact Statement, released August, 2002, ("EIS"), prepared by the staff of the Federal Energy Regulatory Commission ("FERC") as mandated by the National Environmental Policy Act, 42 U.S.C. § 4321, *et seq.* ("NEPA").

2. Coastal Zone Impacts.

As described in the EIS, the project will involve both onshore and offshore impacts in and around the Long Island Sound. In this regard, it is difficult to overstate the importance, environmentally, esthetically, and economically, of the Sound. More than a decade ago, an independent analysis prepared for the United States Environmental Protection Agency concluded that annual shellfishing and finfishing resources could be valued at approximately \$148,000,000. Recreational use was valued in excess of \$300,000,000 and the total of all direct and indirect economic use of the Sound produced a "total use value" of more than \$5,200,000,000. Coastal wetlands associated with the Sound added another \$90-100,000,000. And all of this, it must be stressed, was calculated in 1990 dollars. Staggering as these numbers are, they do not begin to tell the full story.

Prior to European colonization, the Sound supported a vast and interconnected ecosystem of immense productivity. Even after centuries of human impact, industrial pollution and overfishing, the Sound remains, "an 'essential fish habitat' (EFH), defined as being necessary for fish spawning, breeding, feeding, or growth to maturity, for a variety of fish species." Connecticut Siting Council Findings of Fact, Dckt. No. 197, TransEnergie Application for Certificate of Environmental Compatibility and Public Need, March 28, 2001, para. 86. In fact, "Long Island Sound is an environment used by Kemps ridley, Loggerhead, Green, and Leatherback marine turtles [which species] are listed as State or Federal Endangered or Threatened Species, according to Connecticut DEP and NOAA National Marine Fisheries Service." *Id.*, para. 83. Consequently, it is no exaggeration to say that protecting the last vestiges of a heavily impacted but still critically important natural resource is an important national interest.

While the entire Sound is important, there appear to be within it areas that have suffered less from development and industrial activity or otherwise have especially important resources. As noted in recent testimony before the Connecticut Siting Council regarding the Islander East project, the specific area that will be affected along the Connecticut coast, sometimes referred to as the Thimble Islands area, is both unusually important and vulnerable. "This particular area has been, -- first of all from a historical standpoint, the Thimble Island area has been essential for an oystery fishery for over a hundred years. That's fairly well documented. There are a great many oyster beds in the immediate area that have been very important to the shellfish industry for quite some time as I said. Some of the ground is both used also for clams and oysters. Sometimes you can get two crops on one piece of ground." (Testimony of L. Williams, April 17, 2002, p.85).

The project envisioned by Islander East is monumental both in scope and effect. As one expert testified, the Islander East project will be "one of the major most impactful environmental

effects on Long Island Sound, the New York side as well as Connecticut, that I've ever seen." (Testimony of Dr. L. Stewart before the Connecticut Siting Council, April 12, 2002, p. 194.)

Offshore, the project proposes use of horizontal directional drilling ("HDD") to bring the pipe from landfall to a point (the "punchout" point) approximately 3500 feet from shore. (EIS, pp. 3-37, 3-62 to 3-63.) From there, Islander East plans to construct, by clamshell dredge, a transition pit or trench from where the HDD will exit for a distance of about 1 to 2 miles. (*Id.*) From that point to the New York landfall, a plow will be used to bury the pipe. As planned, the project would include in excess of 22 miles of pipeline under the Long Island Sound. Onshore, the route chosen by the company would require clearing woodlands owned and managed by the Branford Land Trust, filling and trenching in many acres of wetlands, and extensive excavations in various residential neighborhoods. (See, EIS, pp. 3-98, 3-131.)

The EIS identifies a number of serious environmental impacts. Approximately 30 acres of wetlands would be disturbed by the construction itself and these acres would be subject to continual disruption due to periodic maintenance operations along the pipeline. (EIS, p. 3-98.) Not only would this construction result in serious damage to coastal wetlands directly tied into the greater Connecticut coastline ecosystem, but the project's ongoing maintenance activities would result in *permanent* changes to a number of important and environmentally-sensitive areas. (See, EIS p. 3-80.)

Offshore, impacts may be even more severe. Specifically, the company plans to connect the land-based portion of the project to the main deep-water pipeline trench by using horizontal directional drilling ("HDD") to bore under the beach for about 3500 feet into deeper water. (EIS, pp. 3-37, 3-62 to 3-63.) The HDD would, however, erupt in the middle of the valuable shellfish habitat between Branford Harbor and the Thimble Islands, in an area that has been spared development over the years and is so pristine that it has been referred to as a perfect location for a marine sanctuary. (Testimony of Dr. L. Stewart before the Connecticut Siting Council, April 12, 2002, p. 254.) As Dr. Stewart stated, the HDD would release huge quantities of bentonite drilling mud "smack dab in the middle of one of the most highly valuable, multiple marine ecological environments there is on the coast of Connecticut." (*Id.* at 236.) Even the company's own expert said of the Thimble Islands area that "the resources include both the commercial fishery and the recreational aspects of the area, the view vista, and the diversity of the habitat, it's a very sensitive area. . . ." (Testimony of Dr. Bohlen before the Connecticut Siting Council, April 16, 2002, p. 34.)

It is in this "very sensitive area" that Islander East plans to dig the HDD punchout hole and accompanying dredged pit. (EIS, p. 3-62.) The company's activities in this regard, involving only the HDD drilling phase, will result in releasing "approximately 448,300 barrels" of bentonite drilling fluid into the environment and excavating a bowl-shaped undersea pit approximately 250 by 300 feet in size to a depth of 20 feet. (EIS, p. 3-53.) This phase alone will

July 9, 2003

Page 4

impact 23 acres of prime shellfish habitat, all in an area of unsurpassed natural diversity and beauty. (See, EIS, p. 3-45, table 3.3.3-1.)

The impacts to coastal resources, however, are not limited to the initial phase of this project. From the HDD outfall point, the pipe is to be laid in a trench for part of the way across the Sound and then buried by jet plow for the remainder of the distance to Long Island. The EIS, and the Findings of Fact of the Connecticut Siting Council, clearly show the extent to which this effort will impact marine resources. It is estimated that 3000 acres of underwater habitat will be disturbed. (EIS, p. 3-45.) The amount of sediment that this project will disturb is staggering -- dredging phase, 44,700 cubic yards, and plowing, up to 504,400 cubic yards. (EIS, p. 3-44.) In addition to these impacts, Islander East predicts that the dragging and other movement of the cables anchoring the work barges (an effect known as 'cable sweep') would damage an area far from the actual trench cuts and up to 2500 feet from the barges. (EIS, p. 3-71.) Further, Islander East estimates that the repeated barge re-positionings will result in up to 120 anchor holes per mile of pipeline trench. (EIS, p. 3-71.) Anchor holes are relatively deep in terms of topography of the seafloor and create oxygen-deprived sediment traps that persist for many years and have a serious adverse impact on shellfishing operations. As the EIS concludes, all of this may "represent a long-term conversion of shellfish habitat [into habitat which will not support shellfish]." (EIS, p. 3-71.)

In addition to the direct impacts just described, the EIS clearly shows that there would be important indirect impacts as well. For example, "the water and sediment quality of many coastal waters in the area are impacted by proximity to urban centers and by industrial and agricultural activities. Pollutants enter in the form of sewage effluent, industrial discharge, dredge spoils, urban runoff, riverine discharge, and atmospheric deposition". (EIS, p. 3-42.) Not surprisingly, therefore, when Islander East took sediment samples (a total of only 23 for about 20 miles of seafloor), they discovered toxic metals in some of the samples at levels indicating contamination. (EIS, p. 3-43.) Of course, disturbance of hundreds of thousands of cubic yards of contaminated sediments will re-mobilize the pollutants, resulting in additional adverse effects on coastal resources, which impacts cannot even be analyzed because a proper data set has not yet been prepared. (See, Letter of the EPA to the FERC, dated Sept. 30, 2002.)

The impacts described above are particularly acute because past experience in the Sound has demonstrated that the effects of underwater construction operations *persist for decades* and effectively eliminate any possibility of commercial shell fishing operations into the foreseeable future. (Testimony of Dr. L. Stewart before the Connecticut Siting Council, April 12, 2002, p. 192; EIS, p. 3-70.) Overall impacts to the Sound, therefore, include excavation of hundreds of thousands of cubic yards of sediment, some of which has been contaminated by various toxic substances, destruction of hundreds of acres of shellfish habitat and degradation of water quality, primarily by sedimentation.

In this regard, it is informative to note the comments of Mr. John Volk, the former Director of the Connecticut Bureau of Aquaculture, on this project in a letter to the ACOE. He states, after noting the variety and wealth of shellfish and other natural resources in the affected area, that:

The use of a plow or jet sled for pipe burial through a sea floor corridor of approximately 23 miles, will result in impacts due to suspended sediment, alteration and/or destabilization of the sea floor, and damage or death to marine life.

An additional concern regarding this project and other proposed submarine utility projects, is the potential cumulative impacts to Long Island Sound's habitat, water quality and fisheries. . . . Alternatives and options regarding energy sources, siting and construction methods should be fully assessed on a regional basis by the regulatory community.

Consequently, Director Volk concluded:

We have determined that the siting and the construction methods for the marine phase of the project will likely cause significant damage and harm to shellfish resources and shellfish habitat. Shellfish aquaculture, commercial and recreational shellfish harvest operations, are likely to be impacted as well. This determination is based on the review of the information provided in the above referenced documents, consultations, as well as staff field experience with a similar project. We therefore recommend that the marine portion of the current application be denied.

II. Relevant State Law.

The Connecticut legislature has established a set of guiding principles for evaluating coastal impacts.

The General Assembly finds that the growing population and expanding economy of the state have had a profound impact on the life-sustaining environment. The air, water, land and other natural resources, taken for granted since the settlement of the state, are now recognized as finite and precious. . . . Therefore the General Assembly hereby declares that the policy of the state of Connecticut is to conserve, improve and protect its natural

resources and environment and to control air, land and water pollution in order to enhance the health, safety and welfare of the people of the state. It shall further be the policy of the state to improve and coordinate environmental plans, functions, powers and programs of the state . . . and to manage the basic resources of air, land and water to the end that the state may fulfill its responsibility as trustee of the environment for the present and future generations.

Conn. Gen. Stat. § 22a-1.

The legislature has gone further, expressly defining the policy of the state with respect to the Long Island Sound. In doing so it made numerous legislative findings, including the following:

- (1) The waters of Long Island Sound and its coastal resources . . . form an integrated natural estuarine ecosystem which is both unique and fragile;
- (2) Development of Connecticut's coastal area has been extensive and has had a significant impact of the Long Island Sound and its coastal resources; . . .
- (5) The coastal area is rich in a variety of natural, economic, recreational, cultural and aesthetic resources, but the full realization of their value can be achieved only by encouraging further development only in suitable areas and by protection of those areas unsuited to development;
- (6) The key to improved public management of Connecticut's coastal area is coordination at all levels of government and consideration by municipalities of the impact of development on both coastal resources and future water-dependent development opportunities when preparing plans and regulations and reviewing municipal and private development proposals; and
- (7) Unplanned population growth and economic development in the coastal area have caused the loss of living marine resources, wildlife and nutrient-rich areas, and have endangered other vital ecological systems and scarce resources.

Conn. Gen. Stat. § 22a-91.

Based upon its findings as described above, the legislature has established a set of goals and policies to govern the management of resources in and around the Long Island Sound as follows:

- (2) To preserve and enhance coastal resources in accordance with the policies established by chapters 439, 440, 446i, 447, 474 and 477;
- (3) To give high priority and preference to uses and facilities which are dependent upon proximity to the water or the shore lands immediately adjacent to marine and tidal waters;
- (4) to resolve conflicts between competing uses on the shore lands adjacent to marine and tidal waters by giving preference to uses that minimize adverse impacts on natural coastal resources while providing long term and stable economic benefits;

- (9) To coordinate planning and regulatory activities of public agencies at all levels of government to insure maximum protection of coastal resources . . . ; and
- (10) To insure that the state and coastal municipalities provide adequate planning for facilities and resources which are in the national interest as defined in section 22a-93 and to insure that any restrictions or exclusions of such facilities or uses are reasonable. Reasonable grounds for the restriction or exclusion of a facility or use in the national interest shall include a finding that such a facility or use: (A) May reasonably be sited outside a coastal boundary

Conn. Gen. Stat. § 22a-92.

State law, therefore, provides several principles that are important in evaluating the Islander East proposal. These include a mandatory preference for water dependent uses if conflicts occur with economic development projects, a clear emphasis on protection of threatened resources, and a statutory right of denial of projects that may reasonably be sited elsewhere. Consequently, it is critical to examine the Islander East project with a view to its demonstrable impacts, the nature and quality of the resources threatened, and whether the project purpose can be successfully accomplished by a less environmentally damaging alternative. To accomplish this, it is necessary to examine initially the defined project purpose.

Purpose.

As noted above, “[t]he purpose of the Islander East Pipeline Project is to provide transportation service for 285,000 dekatherms of natural gas from supply areas, including eastern Canada, to energy markets in Connecticut and New York (specifically Long Island and New York City).” (EIS, p.2) By its terms, therefore, the point of the project is to get natural gas to Long Island.

There are, however, two major issues regarding the defined project purpose. The first is that the officially defined purpose does not survive close scrutiny. The second, and more important issue, is that absolutely nothing in the defined project purpose necessitates use of any particular pipeline route and pursuant to Conn. Gen. Stat. §§ 22a-92, 93(17), 105, 106, and 108, it is a violation of the CZMA to locate non-water dependent activities with significant impacts in sites physically suited for water-dependent uses, particularly when alternatives are available. See also, Section 404(b)(1) of the federal Clean Water Act, 33 U.S.C. § 1251, *et seq.*

With regard to the first issue, the market need identified by Islander East is suspect at best. It appears that the market analysis data upon which Islander East predicated its statement of natural gas demand on Long Island predate the events of September 11, 2001 and the ongoing economic slowdown.

As the attached report (Exhibit A) shows, the “need” for this project was based on what are termed “precedent agreements” entered into with the developers of proposed electric power generation stations on Long Island. However, these developers have either ceased project development or have made alternative arrangements for fuel supply. (Ex. A, p. 2.) Ultimately, Islander East has “substantially overstate[d]” the anticipated growth of the natural gas market on Long Island and has failed to properly consider the additional pipeline infrastructure programs currently proposed or under construction. *Id.* The result is that, while Islander East continues to announce its project purpose as providing 285,000 Dth/day to Long Island, the supposed project need has no justification and is, in fact, chimerical.

Further, it is clear that current information suggests that the Islander East project could well have a detrimental effect on economic activity. Specifically, independent regional regulators have already described the natural gas supply situation in New England as “tight-as-drum” and noted that inducing “additional demand stress . . . competing for the *existing* delivery capacity of New England’s pipelines has potentially ominous strategic implications for the security of New England’s power supply.” (Steady-State Analysis of New England’s Interstate Pipeline Delivery Capacity 2001-2005, produced for ISO-New England, Inc.) (Emphasis in original.) More recently, Alan Greenspan has stated in a published news report (Ex. B) that supplies of natural gas are expected to be limited for a prolonged period. If true, this means an increase in prices, which would substantially depress the potential market on Long Island. As

the attached report states: "growth in gas demand is sensitive to changes in the price of gas. High and volatile gas prices typically inhibit demand growth." (Ex . A, p 8.) Consequently, Islander East has built its project on a false statement of need.

This leads to a second, but related, issue. Even if Islander East's unsupported assumptions are accepted, purely for argument's sake, the proposed purpose can be satisfied by any of a variety of alternatives. Simply put, if the goal is to transport more natural gas to Long Island, there is no reason that the pipeline needs to be placed in the Thimble Islands reach of the Sound.

For example, the FERC staff concluded its independent project review and stated:

We evaluated six system alternatives, one of which, the ELI System Alternative, is based on Iroquois' ELI Extension Project. The second is based on Tennessee's planned Connecticut-Long Island Lateral Project. The third is based on other existing or planned systems in New York or New Jersey and the fourth is based on the local distribution company's (KeySpan) existing facilities. We also considered two other system alternatives (the One-Pipe System Alternative and the Long Island System Alternative) both of which would carry the total volumes of the ELI Extension Project and the Islander East Project.

We have determined that one of these system alternatives, the ELI System Alternative, is environmentally preferable because it has a shorter Long Island Sound crossing, avoids more shellfish leases, and would only have air quality and noise impacts onshore in Connecticut. The impacts on Long Island would be identical to the Islander East Project.

Our analysis of the system alternative offshore pipeline indicates the crossing of the Sound would be reduced by 5.5 miles. The ELI System Alternative would open-cut about 936 feet of shellfish leases, avoiding direct impacts to other near shore leases by tapping into Iroquois' existing pipeline offshore. Islander East would open-cut about 6,141 feet of shellfish leases, avoiding direct impact to other leases by drilling the Connecticut shoreline. Construction offshore would impact 2,930 acres for the ELI System Alternative and 3,106 acres for the proposed project. For a more complete discussion of the offshore impacts of the ELI

System Alternative see the discussion of Iroquois' offshore pipeline in the Environmental Report for the Eastern Long Island Extension Project filed in Docket No. CP02-52-000.

Based on our environmental analysis, the ELI System Alternative is environmentally preferable to the proposed route because it reduces onshore and offshore impacts, except for emissions.

The conclusion reached by the staff of the FERC has been echoed by essentially every independent regulator which has reviewed this project. For example, the United States Environmental Protection Agency ("EPA") has stated:

ELI system alternative. This alternative would be shorter in length in the Connecticut onshore portion, as well as the Long Island Sound offshore portion, although there would be differences in terrain traversed (no detail provided). It would cross fewer streams and would apparently avoid shellfish beds in Long Island Sound. No information is provided about the potential wetland impacts associated with the ELI alternative. The limited analysis allows for a conclusion that the ELI alternative appears to meet the project purpose and need with a reduced potential to impact the environment.

The Army Corps of Engineers similarly noted that :

The analysis, although incomplete, appears to suggest that the [ELI] alternative would be practicable, shorter in length (both onshore and offshore), cross fewer streams, avoid designated shellfish beds, affect fewer residences, and minimize trenching in the nearshore environment. Consequently, the ELI alternative . . . appears to meet the stated project purpose and need while discernably reducing potential adverse impact to the aquatic environment.

Letter of Christine Godfrey, Chief, Regulatory Division of the ACOE, dated June 17, 2002 to the FERC.

More importantly, even if one assumes that the need for natural gas advanced by Islander East both exists and is a legitimate purpose, there is nothing in this definition of project purpose that presupposes that only one particular pipeline route can satisfy that need. If there is, in fact, a need for 285,000 Dth/d of natural gas on Long Island, then it clearly does not matter, from the

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standpoint of "need," *how* that quantity of natural gas gets there or the pipeline route taken to reach Long Island. Thus, the claim by Islander East that a certain amount of gas needs to be made available does not translate into a conclusion that only a pipeline through the Thimble Islands will address and meet that need.

Consequently, in the necessary balancing of water-dependent uses versus economic benefit that must be undertaken in evaluating this project, it is clear that the benefit will not be there at all, certainly from the perspective of New England. The importance of the water-dependent use, on the other hand, is clearly evident and the threat to this use is significant. Connecticut's stewardship of the Sound and the significant measures taken by it to preserve and improve the essential natural characteristics of this environmental resource will be undermined if this project is approved. Further, there is *no* reason why the benefit, if it exists, cannot be obtained by simply moving the proposed pipeline route out of the critical habitat area. To the contrary, each and every regulator which has reviewed this project has concluded that the alternative route proposed by the ELI project is superior. Thus, in the absence of any evidence, let alone credible evidence, that only the one designated route is feasible, and the conclusive evidence of at least one feasible and preferable alternative, the law plainly requires denial of this application.

Conclusion

Ultimately, Islander East has used obsolete and questionable data to create a "need" for natural gas that does not exist. Even if there were a real need, it could be satisfied by any of a number of less damaging alternatives. Under state law, it is clear that the precious and heretofore untouched resources of the Thimble Islands cannot be destroyed to permit a profoundly damaging project that, if it truly needs to be built, can easily be relocated to less critical areas.

Very truly yours,


RICHARD BLUMENTHAL
Attorney General

TO: Robert Snook, Esq.

FROM: Philip Sussler

RE: Assessment of "Need" for the Islander East proposed gas pipeline

DATE: March 20, 2003 (revised)

Introduction:

The Islander East project (the "Project") is a proposed natural gas pipeline running from Connecticut, across Long Island Sound, to Long Island, New York.¹ The project will interconnect with the existing C-system of the Algonquin pipeline ("AGT") at North Haven, CT, will enter Long Island Sound at Branford, CT, and will come ashore on Long Island at Wading River (near Brookhaven, N.Y.) and interconnect on Long Island with the gas distribution system of KeySpan Energy ("KeySpan"), the local gas distribution company (or "LDC") serving Long Island.

The Project also entails upgrades to the existing Algonquin pipeline system in Connecticut affecting approximately 13.7 miles of existing parallel pipelines and the installation of a new compressor station by AGT in Cheshire, CT. The Project proposes to lease these incremental facilities on the AGT system. Approximately 22.6 miles of the proposed new pipeline will be located offshore in Long Island Sound, 10.2 miles will be located on onshore in Connecticut and, 12 miles located onshore in Long Island. The Project is sponsored by a limited liability company formed by subsidiaries of Duke Energy, the owner of AGT, and KeySpan. The anticipated construction cost of the Project is \$149.6 MM and its originally anticipated in-service date was November 1, 2003. Commencement of construction has been delayed pending receipt of necessary regulatory and environmental permits.

The Project filed for a certificate of public convenience and necessity ("CEPCN") with the Federal Energy Regulatory Commission ("FERC") on June 15, 2001. FERC issued its Preliminary Determination ("PD") for the Project on December 21, 2001, in which it approved the economic and regulatory (non-environmental) aspects of the Project. *Islander East Pipeline Co. LLC*, 97 FERC ¶61,363 (2001). FERC reserved for later decision issuance of the certificate, pending its review of the environmental impacts of the Project, which it then decided, issuing the CEPCN to the Project, in its order issued on September 19, 2002, *Islander East Pipeline Co. LLC*, 100 FERC ¶61,276 (2002). Subsequent to these FERC approvals, the Project failed to receive its consistency approval under the Coastal Zone Management Act from the Connecticut Department of

¹ The Project is proposed to be approximately 44.8 miles in length and consist of a 24-inch, pipe with 900 pounds per square inch maximum allowable operating pressure.

Environmental Protection (“DEP”). In addition, the Project’s approval from the Army Corps of Engineers is still pending.

This report assesses and critiques the “need” for the proposed pipeline.

Summary and Conclusions:

Islander East premises the need for its project on precedent agreements indicating commitment for 260,000 Dth/day out of the total proposed incremental capacity of 285,000 Dth/day. The power plant developer counter-parties to these precedent agreements do not need the incremental capacity, either because (in the case of AES) they appear to have ceased project development or (in the case of ANP) have made alternate arrangements. The LDC counter-party is a partner in the proposed pipeline so it is not clear whether and to what extent its commitment to utilize the gas is binding. Islander East also premises the need for its project on a general assessment of the gas market on Long Island that substantially overstates the anticipated growth rate of gas usage on the island (by a factor of 4 or more) and inflates substantially the likely gas requirements of the power sector. In addition, the Islander East market study fails to analyze the ability of the substantial increases in gas pipeline delivery infrastructure planned and/or under construction for the New York City metropolitan area to fully displace any requirement for the relatively small incremental volumes which will be made available by the Islander East project.

Detailed Discussion:

The Project’s sponsor, in its application for a CEPCN to FERC, justified the need for the Project, in part, by submitting “precedent agreements” for rights to transport volumes of gas. These agreements were with different divisions of KeySpan for delivery to its New York City area (referred to as “KEDNY”) and Long Island area (referred to as “KEDLI”) local gas distribution systems and with two developers of proposed power plants on Long Island, namely: (a) AES Endeavor, a division of AES Corporation (AES Calverton); and (b) Brookhaven Energy Limited Partnership, an affiliate of American National Power (ANP Brookhaven). The Project will serve primarily as a radial extension of the existing AGT system and will permit the transportation of gas supply from the existing AGT system to delivery points on Long Island. The Project itself adds no new gas supplies, rather it is a build out and extension of the existing gas transportation infrastructure.

The specific transportation volume commitments indicated in each of the precedent agreements entered into by Islander East are as follows:

Table I – Islander East Proposed Transportation Volumes ²						
Proposed Customer:	Maximum Daily Quantity at Year Beginning					
	11/1/03	11/1/04	11/1/05	11/1/06	11/1/07	11/1/08
ANP Brookhaven	90,000	90,000	90,000	90,000	90,000	90,000
AES Endeavor	60,000	60,000	60,000	60,000	60,000	60,000
KEDLI maximum (after yearly election)	60,500	82,500	112,750	134,750	162,250	162,250
KEDLI minimum (after yearly election)	60,500	71,500	92,000	114,000	138,000	162,250
KEDNY maximum (after yearly election)	49,500	67,500	92,250	110,250	132,750	132,750
KEDNY minimum (after yearly election)	49,500	58,500	75,500	93,000	112,000	132,750
Total Maximum MDQ ³	260,000	300,000	355,000	395,000	445,000	445,000
Total Minimum MDQ	260,000	280,000	317,500	357,000	400,000	445,000

The proposed transportation capacity of the pipeline will be initially 285,000 DTH/day. The remaining 25,000 DTH/day of available capacity (after accounting for the volumes designated in the precedent agreements) is proposed for interruptible and short-term services. The timing and scope of upgrades to the line to increase the capacity to accommodate the maximum volumes authorized under the precedent agreements in later years is “not certain” (IE application, p.22). Required upgrades would occur through the addition of incremental compression capacity and pipeline looping. *Id.* at 22.

The Project sponsors assert that these projected incremental transportation volumes will be demanded and can be met by the proposed Project for delivery into Long Island and that, implicitly, existing and other new gas infrastructure projects are insufficient to meet the same requirements.⁴ As described in greater detail below, these assertions are problematic or incorrect and/or based on faulty assumptions.

Iroquois Pipeline also applied for a CEPCN with FERC to approve a pipeline project (the so-called ELI project) crossing Long Island Sound from Milford, CT, to Brookhaven, LI, with an anticipated delivery capacity of 175,000 DTH/day. This project, although executing precedent agreements with different counter-parties than Islander East, essentially paralleled the Islander East project and would have served the same ultimate market on Long Island. FERC issued a PD approving the non-environmental aspects of the ELI project by order, dated September 19, 2002, 100 FERC ¶61,275 (2002). Iroquois

² Application of Islander East Pipeline Company, LLC, FERC docket CP01-384-000 (June 15, 2001) at p. 21. (The Islander East FERC application is referred to hereafter as the “IE Application”).

³ MDQ is the maximum daily quantity measured in dekatherms. A dekatherm is 10 therms. A therm has the heating content equivalent of approximately 100 cubic feet of natural gas.

⁴ These assessments of the gas market on Long Island are contained in a report prepared by Merrimack Energy for Islander East and filed as Exhibit I-1 in the IE Application.

has reportedly subsequently withdrawn the project based on, among other factors, uncertainties relating to permitting and lack of adequate demand. Iroquois' withdrawal of the ELI project is, at a minimum, indication that incremental demand beyond that asserted to exist by Islander East is insufficient to support incremental pipeline capacity.

In the remainder of this report, we analyze the Islander East Pipeline Project's projected demand, by focussing on the asserted two groups of potential users of the facility – the power plant developers (AES and ANP) and the LDC (KEDLI and KEDNY).

1. Power Plant Developers.

The two power plant project developers which signed precedent agreements to utilize the pipeline, either are currently not going forward with further project development (AES) or have negotiated alternative arrangements to acquire gas supplies (ANP). The volumes nominated under these precedent agreements comprise more than half of the capacity of the line; so that uncertainty about the commitments of these developers is a critical issue for the viability of the pipeline.

AES, the parent of the entity developing the AES Calverton project, is a global power plant developer and operator. Along with many other companies in the electric power generation business during the past year, AES has experienced extreme financial stresses entailing the selling of power plant assets, the surrender of assets to secured lenders and the halting of power plant development efforts. Reflecting this status, the AES Calverton project has not advanced in development.⁵ While no official announcement has been issued canceling the project, it is anticipated that the project will not be pursued.

The ANP Brookhaven project, a proposed natural gas-fired 580 MW electric generating plant located in Brookhaven, Long Island, has undertaken gas supply arrangements which do not require it to utilize the Islander East pipeline, if the pipeline is not constructed. The ANP project was granted a certificate of environmental compatibility and public need by the New York State Board on Electric Generation Siting and the Environment ("NYSB") under New York's so-called Article X process, by orders dated April 8, 2002 (the "Recommended Decision") and August 14, 2002 (the "Final Order"), in Case No. 00-F-0566. The Final Order was later confirmed in an "Order Denying Petition for Rehearing and Granting Petition for Clarification" dated October 24, 2002. The Long Island Power Authority ("LIPA"), the franchised electric utility operating on Long Island, objected to the project and intervened actively against it during the course of the proceeding.

In its review of the ANP project, the NYSB noted that the project "may be able to directly connect to the proposed Islander East Pipeline facility." But, it also noted that the project

may negotiate with KeySpan Energy if the Islander East Pipeline Company facility is not a viable option. The topic agreement describes the upgrades KeySpan Energy's distribution system would require if it were to supply gas to the [ANP] Project. If the upgrades are installed, no adverse impacts are expected to occur to the existing gas transmission and distribution systems from the operation of the Project. Recommended Decision at 52.

The ANP project is anticipated to begin construction in the first quarter of 2003, with construction anticipated to take approximately two years.

Both precedent agreements entered into by Islander East and AES and ANP have termination and cancellation dates, which may be exercised if the pipeline project fails to receive its required permits by certain dates. Specifically, AES can cancel the precedent agreement, if permits are not granted to the pipeline project by certain outside dates, all of which have now passed. ANP can similarly cancel its precedent agreement. In addition, ANP and AES each had a one-time option, which must have been exercised by June 1, 2002, to reduce their capacity commitments by up to 40,000 and 20,000 DTH/day, respectively. It is not known whether these cancellation and/or volume reduction options have been exercised. If such rights have been exercised in light of the development uncertainties and issues facing the power projects, this would eliminate a substantial portion of the anticipated usage of the proposed pipeline.

The Merrimack Study, utilized to justify the Islander East project, also analyzed power plant sector gas demands as a general matter. The Study sought to demonstrate a continuing general need for gas supplies to serve new power plant construction on Long Island, buttressing the specific volumes nominated in the executed precedent agreements. This analysis, however, incorrectly identifies anticipated developments in that sector and inflates the likely gas requirements relating to power plant development.

Both the proposed ANP and AES power projects together (comprising over 1000 MW in installed capacity) and the ANP project alone exceed the projected growth in summer electric peak load on Long Island of 313 MW for the period 2002-2005.⁶ It is also the case, that new electric generating capacity, if constructed, will operate typically at substantially improved efficiencies when compared with older generation, with conversion efficiencies (converting a given amount of gas into electricity) nearly 40% better than existing generating facilities. Thus, if the ANP plant is constructed it can be anticipated to displace existing oil and gas-fired electric generation located on Long Island, producing more power utilizing substantially less gas than equivalent generation produced by existing facilities. The Merrimack Study also incorrectly assumed that

⁶ New York Power Alert, II (2002). The Power Alert II study issued by New York Independent System Operator ("NYISO") substantially revised the forecasts for incremental power generation in New York from those utilized by Islander East in its market study. Power Alert II revised the need for new electric generation in New York downwards by 17%. This reduction was due to, among other things, a shift in some electric demand to PJM, the power pool serving primarily Pennsylvania, New Jersey and Maryland, reductions in electric demand due to 9/11 and the recent installation of 440 MW of peaking generation by the New York Power Authority throughout the NYC metropolitan area.

needed electric generating capacity was a proxy for incremental gas requirements. In reality, incremental electric generation capacity is required in large part to serve peak electric loads only and does not run continuously. These electric loads are more likely to occur during summer periods when the LDC demand for gas is likely to be low – such that the electric power generation requirements are not additive, as the Merrimack Study incorrectly assumes, with that servicing the KeySpan gas distribution requirements.

The Merrimack Study also fails to consider other developments in the electric sector which will impact gas demand on Long Island. Specifically, the TransEnergie 330 MW electric transmission cable running from Connecticut to Long Island, constructed but not yet energized, if it operates can be anticipated to transmit lower cost power from New England to Long Island so as to further displace the need for incremental gas-fired generating capacity on Long Island. Further, the Merrimack Study, reflecting the period when it was prepared, does not analyze the recent transforming changes in the electric generation sector following the collapse of Enron in late 2001. Across the sector, companies engaged in electric generation (similar to and including AES) have been forced to sell assets, recapitalize their balance sheets and discontinue development efforts. Merchant plants lacking firm long-term contracts to sell their power, such as the ANP project, have been unable to achieve or secure financing and generally shut out of the credit markets. New electric generation projects across the country, including New York, have been put on hold or cancelled.

To summarize, with respect to the two power projects which had signed up for the Islander East pipeline, the AES plant is not advancing and likely will not be developed; and the ANP plant has alternative sources for its gas. More generally, the anticipated general need to add power plant capacity on Long Island is not likely to require the incremental transport volumes made available by the proposed pipeline.

2. Gas LDC Demands.

In addition to the asserted demand for Islander East resulting from proposed power plant projects on Long Island, the Project also premised a major portion of the anticipated usage of its facilities to stem from the gas requirements of the KeySpan local gas distribution operations on Long Island through KEDLI (serving Nassau and Suffolk Counties) and through KEDNY (serving Queens and Brooklyn, New York).

To put the project's anticipated usage rates in perspective, the maximum volumes committed for by KeySpan under precedent agreement with Islander East constitute 4.5% of peak-day send-out of the KEDNY system, 9.5% of the KEDLI system and 6.4% of the combined systems.⁷ It is simply not the case that Islander East's proposed transport volumes, equivalent to a relatively small portion of KeySpan's overall usage, can only be met by the Islander East facilities and cannot be satisfied from existing infrastructure or

⁷ These percentages are calculated utilizing KeySpan's reported send-out volumes for 1999/2000 as reported in the Merrimack Study.

other proposed gas infrastructure expansions serving the New York City metropolitan area.

KeySpan acquires the majority of its gas supply through the so-called New York Facilities System, which supplies some 60% of the natural gas requirements of the metropolitan New York City area, including Long Island. KeySpan also relies on local gas injection facilities (primarily LPG and LNG) to meet its peak load requirements. It also is currently serviced by two pipelines connecting to Long Island, Iroquois and Transco. A substantial number of other new natural gas pipeline projects have been proposed and are under construction to provide service into the New York metropolitan area which would more than satisfy KeySpan's incremental needs proposed to be met by the Islander East Project. These projects include the MarketLink, Millenium and Eastchester gas pipeline projects.⁸ A listing of these projects is attached as Table II at the end of this report.

Charles River Associates, in a recent report completed for NYISO and the New York State Energy Research and Development Authority ("NYSERDA") concluded as follows:

Substantial expansion of the New York pipeline infrastructure is already underway. With projects that have recently been completed or are expected to be completed by the end of 2003, a total of 465 thousand dekatherms (MDT) per day of new delivery capacity will be available into the downstate region. This additional capacity represents a 7 percent increase in delivery capacity to the State and a 16 percent increase into the downstate region, and exceeds forecasted growth in nongeneration gas demands through at least 2005.

In addition to the 465 MDT per day of expansions already being added, the Federal Energy Regulatory Commission (FERC) has provisionally approved projects that could provide a total of approximately 800 MDT per day, primarily to the downstate region.⁹

Islander East's maximum day delivery capacity would comprise only 22% of this incremental capacity (both under construction and proposed).

⁸ The Millenium project runs 442 miles from Lake Erie to Mount Vernon, New York and has capacity for delivering 700,000 DTH/day, with capacity to deliver up to 350,000 DTH/day at its Westchester terminus and available to serve the metropolitan New York City area. The EastChester project alone, extending the Iroquois pipeline from Northport Long Island into the Bronx, will serve an incremental 220,000-330,000 DTH/day on a long haul basis into the New York City area. See Table II below.

⁹ CRA, *The Ability to Meet Future Gas Demands for Electricity Generation in New York State*, prepared by for NYISO and NYSERDA (July, 2002) at 1 (referred to herein as the "CRA Report"). The 456,000 DTH/day capacity does not include Islander East. *Id.* at __, n.22. The cited 800,000 DTH/day in provisionally approved gas transportation capacity should be reduced to 515,000 DTH/day, exclusive of the Islander East capacity which was counted in arriving at the 800,000 DTH/day cited in the text. This lower value still comprises a very large expansion in pipeline deliverability to the New York down-state region.

In addition, Islander East premised the volumes committed to KEDNY and KEDLI on excessive projected rates of growth of gas demand on their systems. Islander East projected a 6% annual growth rate for gas throughput in its market study for the period from 2003 to 2010. It is highly unlikely that anything close to this growth rate will be reached.¹⁰ This projection should be compared with a growth rate of 1.2% made by the federal Energy Information Agency for the Middle Atlantic region. Population, a key driver of gas consumption, is anticipated to grow very slowly on Long Island (at 0.5% annually). In addition, the growth in gas demand is sensitive to changes in the price of gas. High and volatile gas prices typically inhibit demand growth. Gas prices in recent periods have been highly volatile and, for extended periods, in excess of the equivalent price of fuel oil.

Finally, KeySpan is a 50% partner in the Islander East project. Given its role in ownership of the project, it is not clear the extent to which its obligations to market the gas from the project are binding (as they would be if the arrangement was negotiated with an independent third-party) and, therefore, reflective of actual demand in KeySpan's service territory.

3. Interactive Effects of Gas LDC and Power Plant Demand and Power Plant Displacement.

As noted previously, gas demand from the power sector typically is greater in the summer because the electric system in the New York City metropolitan area experiences its peak usage during the summer driven by air conditioning loads. Gas LDC demand in the U.S. Northeast, by contrast, typically peaks in the winter (because of its heavy use for heating). In addition, new gas-fired electric generation is much more efficient in utilizing gas to generate electricity and, to the extent it displaces older gas-fired electric generation, may actually decrease gas used for electric generation.

Islander East's market demand analysis assumed that the separate demands for electric power and by the gas LDCs are additive, when, in fact, they exhibit substantial seasonal diversity. In addition, it does not appear that the market analysis considered appropriately the effects on gas use of the improved efficiency of new power plants. As a result, Islander East's projected need for the Project substantially overstates the incremental contribution to gas demand resulting from electric power needs.

CRA in its July, 2002 report to NYISO and NYSERDA described these phenomena as follows:

Gas fired, combined-cycle (CC) plants account for almost 90 percent of the new electric generating capacity proposed for New York. These CC units are substantially more efficient than existing gas-fired steam units. For each British thermal unit (Btu) of gas, a new CC unit can produce about 50 percent more

¹⁰ DRI*WEFA, *Natural Gas Consumption Outlook for New York City Metropolitan Areas and Long Island* (2002).

electricity than a steam unit. Hence, the presence of these units will increase gas demands only if generation from existing units burning other fuels or imports from other regions are displaced; if generation from less efficient gas-fired units is displaced, gas demands will *decrease*, ceteris paribus. New units are most likely to displace non-gas-fired generation during winter periods when gas delivery capacity has been unavailable to generators and steam units have opted to burn residual oil. In the summer, when more gas has been used for generation historically, new gas-fired units are more likely to replace generation from less-efficient, existing gas-fired units.

CERA Report at 2.

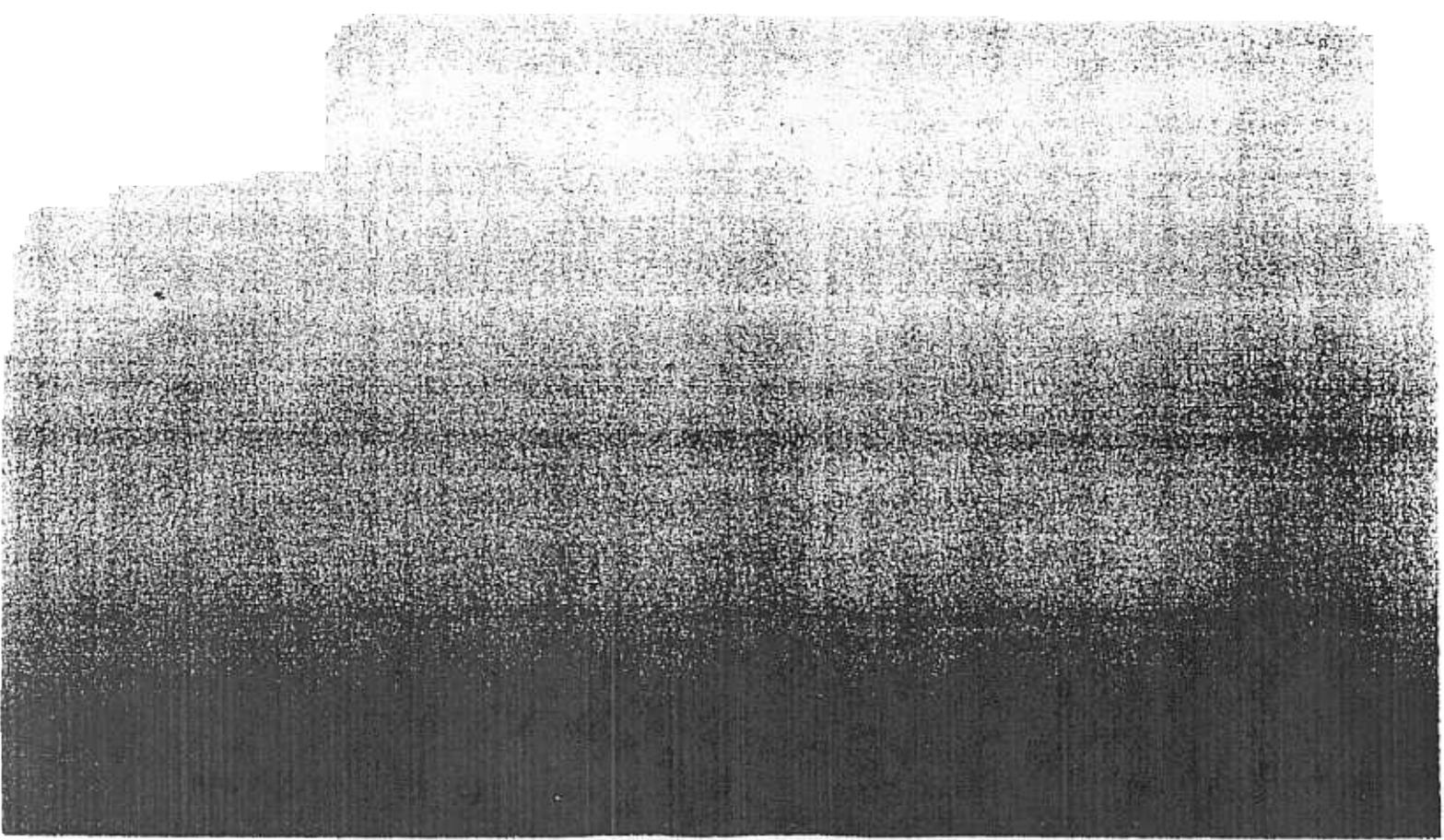
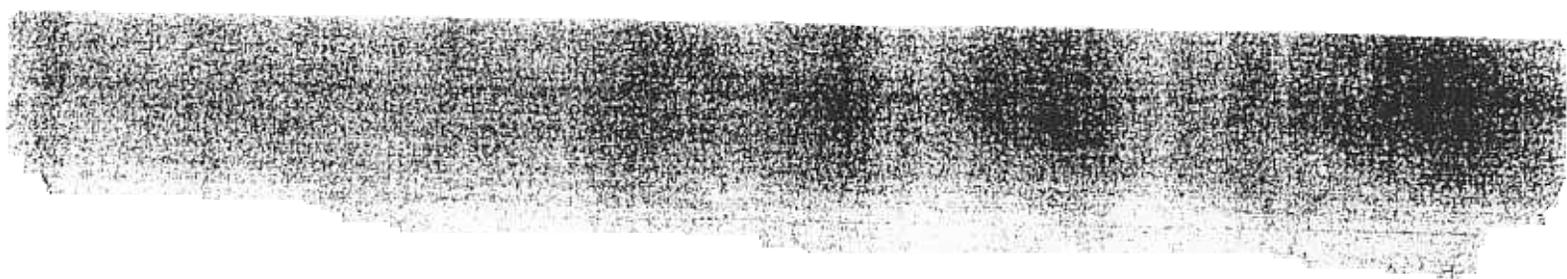
CRA, in the CRA Report, conducted a detailed modeling of gas demand and likely electric generation expansion scenarios for New York State and, separately for down-state, in order to forecast the adequacy of the gas infrastructure system to serve both non-electric gas demand and gas-fired electric generation. CERA concluded as follows:

With the addition of 465 MDT per day of pipeline capacity assumed to be in place by November, 2003 [which does not include the Islander East volumes], New York will have sufficient gas delivery capacity to supply the amounts of gas required to generate under all 2005 generation and post-2003 pipeline addition [anywhere from 0 to 800 MDT/day incremental additions] scenarios provided the existing ability to burn oil is retained.

CERA Report at 5.

Table II – Incremental Pipeline Projects serving metropolitan NYC ¹¹				
Project	Length	Maximum Delivery Volume	Beginning - Terminus	FERC order approving project
MarketLink Phase I and II		115,000 DTH/day (Phase I to NY) 130,000 DTH/day (Phase II to PA and NJ)	Extension of the Transco Leidy Line from Leidy, PA to NYC	FERC approval
Hanover Compressor		135,000 DTH/day	Increased compression at AGT compressor station in Hanover, NJ	FERC approval
Leidy East		130,000 DTH/day	Looping and added compression on Transco's Leidy Line in PA and NJ	FERC approval
Millenium	442 miles	700,000 DTH/day; 350,000 DTH/day (deliverability into NYC area)	Lake Erie/Mount Vernon, New York	FERC approval: PD Dec., 2001; CEPCN, Sept., 2002
East Chester		230,000 DTH/day	Northport, LI to the Bronx, NY	FERC approval
Texas Eastern Incremental Market Expansion		100,000 DTH/day	Expansion in TETCO system for delivery to NJ Natural Gas Company	
Iroquois Brookfield		85,000 DTH/day	Delivery to marketing and power companies in NYC	
ConneXion Project		500,000 DTH/day	Expansion in storage and delivery to NYC on Tennessee Pipeline	
Blue Atlantic	750 miles, undersea	1,000,000 DTH/day	El Paso project running from Nova Scotia to NYC area	

¹¹ Source: New York State Planning Board, 2002 State Energy Plan and Final Environmental Impact Statement (June, 2002), section 3.5.



Greenspan Sees Higher Natural Gas Prices

By H. JOSEF HEBERT
Associated Press Writer

WASHINGTON (AP) -- Federal Reserve chairman Alan Greenspan predicted tight supplies of natural gas and high prices for a prolonged period Tuesday, largely because - unlike oil - the U.S. market is unable to draw on world gas supplies easily.

"We are not apt to return to earlier periods of relative abundance and low prices anytime soon," Greenspan said in testimony at a congressional hearing. He noted that the markets are anticipating natural gas prices of more than \$6 a thousand cubic feet well into next year.

Market expectations "imply a 25 percent probability" that the peak price natural gas on the wholesale market exceed \$7.5 per thousand cubic feet by next January, in the middle of the winter heating season, Greenspan said.

Greenspan said that already the increase in gas prices - more than double what they were last year - "have put significant segments of the North American gas-using industry in a weakened competitive position" against industries overseas.

"Unless this competitive weakness is addressed, new investment in these technologies will flag," Greenspan said in his appearance before the House Energy and Commerce Committee.

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Greenspan did not specifically address whether these problems, affecting especially the chemical, fertilizer, steel and aluminum industries, might hinder economic recovery.

Earlier, the Energy Department said that extremely short supplies of natural gas in storage will result in high prices to continue through this year and into 2004. Gas stocks in storage were 38 percent below what they were last year and 28 percent lower than the five-year average.

"An abnormally hot summer, followed by a cold winter could push natural gas deliverability to the limit and cause record high prices," Guy Caruso, head of the government's Energy Information Administration, told a congressional hearing.

Greenspan said the supply and price problems stem from "a modest gap" between growing demand for the environmentally friendly fuel and supplies that are limited. "Rising demand for natural gas, especially as a clean-burning source of electric power, is pressing against a supply essentially restricted to North American production," said Greenspan.

"If the train wreck occurs and natural gas prices skyrocket and shortages occur, who will be at fault?" Rep. Billy Tauzin, R-La., the committee's chairman, had asked earlier. "We see a storm brewing on the horizon. We need to prepare for it."

But a panel of industry officials provided little insight on what might be done to increase supplies dramatically in the short term, or head off higher prices this summer and winter.

Richard Sharples, a vice president of Anadarko Petroleum Corp., said a chronic gap between supply and demand needs to be addressed by removing regulatory barriers to exploration and development, and providing industry with

greater access to gas reserves on federal lands.

That won't help consumers this year in Ohio where Donald Mason, head of the state Public Utilities Commission, predicted that the average residential heating bill next winter will be \$220 higher per household than it was last winter. He said he's trying to find a way to "prepare (people) for the sticker shock."

"It's already impacted us," Greg Lebedev, president of the American Chemistry Council said in an interview. "And with the domino effect when you have an industry our size, it will by definition have a cascading effect on the entire economy."

Robert Liuzzi, president of CF Industries Inc., speaking on behalf of the fertilizer industry, said high fuel prices already have forced one-fifth of the industry production capacity to shut down. "This situation threatens to destroy an efficient U.S. industry and displace thousands of workers," he said in remarks prepared for the hearing.

The Bush administration also is worried.

Energy Secretary Spencer Abraham has asked the National Petroleum Council to provide a game plan before the end of this month on how to deal with "the looming challenges we face" because of the short-term natural gas supply crunch.

This spring, natural gas in storage dropped to 623 billion cubic feet, the lowest it has been since the government began keeping records in 1976. Stocks have increased somewhat, but remain 38 percent below last year, and 28 percent below the five-year average, according to the department's Energy Information Administration.

By next fall, the government would like to see about 3.5 trillion cubic feet of gas in storage to be ready for the winter heating season, or about three times the amount available now. The average natural-gas fueled home uses about 80 thousand cubic feet a year, according to the American Gas Association.

"The natural gas industry is at a critical crossroads," says Carl English, president of Consumers Energy in Jackson, Mich. He said while the federal government encourages increased use of natural gas to improve air quality and other reasons, it also makes it difficult to get it to meet the increased demand.

A group of 29 Democratic senators recently wrote Abraham urging him to take steps to promote increased conservation to try to curtail gas demand this summer. Abraham agreed to push for conservation measures.

There will be enough gas to go around, but "we're trying to prepare customers for higher prices this winter regardless of the weather," says Peggy Laramie, a spokeswoman for the American Gas Association. The group represents 191 utilities that deliver natural gas to more than 53 million homes.

The spot price on Monday for natural gas was \$6.25 per 1,000 cubic feet at the Henry Hub transit center in Louisiana. The average price was about \$3 per 1,000 cubic feet last year, and \$2.46 per 1,000 cubic feet from 1996-2000, according to the Energy Department.

Despite the high prices, there is little sign that the amount of gas being developed will increase significantly this year with the government expecting an overall 2 percent decline in production compared with last year. The number of drilling rigs has increased about 22 percent from a year ago, but remains below the number in operation in 2001 when surging prices caught the industry's attention.

On the Net:

Energy Department forecast: <http://www.eia.doe.gov>

American Gas Association: <http://www.aga.org/>

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APPENDIX I

May 5, 2003 Letter From CT DEP

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



**STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION**



May 5, 2003

Mr. Gene Muhlherr
Islander East Pipeline Company, LLC
454 East Main Street, Route 1
Branford, CT 06405

RE: WATER QUALITY CERTIFICATE APP. #200300937
Towns: Cheshire, Wallingford, North Haven, East Haven, North Branford and Branford

Dear Mr. Muhlherr:

The Department of Environmental Protection (the "Department") acknowledges receipt of new application materials regarding your proposal to upgrade existing interstate natural gas pipeline facilities and construct a new gas pipeline within the coastal boundary, inland wetlands, tidal wetlands and coastal waters of the state. This material received on March 17, 2003, includes a new Water Quality Certificate (WQC) application submitted pursuant to section 401 of the Federal Clean Water Act, as amended, and assigned #200300937 by the Department. Also received on March 17, 2003 were revisions to the pending Tidal Wetlands and Structures & Dredging (TWSD) permit application #200200761-SJ.

The purpose of this letter is to comment on the completeness of the above-referenced federal WQC application and to request additional information that the Department deems necessary to process the application. As you know, with respect to your TWSD permit application, Connecticut Public Act 02-95 prohibits the Department from considering and rendering a final decision on any state application related to utility crossings of Long Island Sound until after June 3, 2003. However, please note that information requested below to complete the federal WQC application is also necessary to complete the TWSD permit application as the application requirements and standards for authorization are essentially the same.

In addition, this information, particularly the alternatives analysis requested, has a bearing upon resolution of the Federal Coastal Zone Management Consistency (FCC) appeal now pending before the U.S. Department of Commerce. As you know, our October 15, 2002 FCC denial of the proposed project focused on adverse impacts to Connecticut's coastal resources and water-dependent uses and potential alternatives to the proposed project that could eliminate or reduce these impacts.

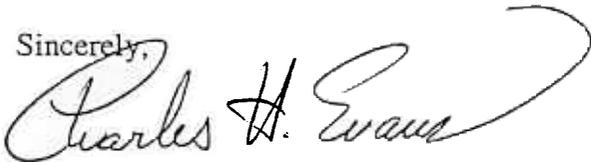
Please mail the required additional materials to the following address and include the application identification number on all correspondence.

Department of Environmental Protection
Office of Long Island Sound Programs
Attn: Susan Jacobson
79 Elm Street
Hartford, CT 06106-5127

Please be aware that any work in tidal wetlands, or waterward of the high tide line, in the tidal, coastal or navigable waters of the state undertaken without appropriate authorizations is a violation of state law and is subject to enforcement actions by this Department and the Office of the Attorney General.

If you have any questions, please contact Susan Jacobson of my staff at (860) 424-3034. Thank you.

Sincerely,



Charles H. Evans
Director
Office of Long Island Sound Programs

CE/PF/SJ
Enclosures

cc: Joseph Reinemann, Islander East Pipeline Company, LLC
Cori Rose, U.S. Army Corps of Engineers
Mike Ludwig, NMFS
File TWSD #200200761-SJ/Branford
File WQC #200300937
David Wrinn, Office of the Attorney General
David Carey, Department of Agriculture/Bureau of Aquaculture
Charles Duffy, Robinson and Cole
Joanne Wachholder, FERC
Michael Marsh, US EPA

**MATERIALS REQUIRED TO REVIEW APPLICATION
WATER QUALITY CERTIFICATE APP. #200300937****Cheshire, Wallingford, North Haven, East Haven, North Branford and Branford****Alternative Routing/Alignment Analysis**

Generally, to receive approval for a proposal, an applicant must fully demonstrate that: (1) adverse impacts, including specific impacts on coastal resources, navigation and water-dependent uses have been minimized to the greatest extent practicable; (2) the scope and extent of encroachments into tidal, coastal or navigable waters have been minimized to the greatest extent practicable; (3) any remaining adverse impacts are acceptable and consistent with applicable statutory standards; (4) alternatives with the least adverse impact and minimal encroachment into the public trust area waterward of the mean high water have been utilized.

While the Department recognizes that the proposed route is the one for which the Federal Energy Regulatory Commission (FERC) has provided its Certificate, it still remains the responsibility of the applicant, as part of the Department processes, to fully evaluate alternatives and provide a compelling demonstration that there are no feasible alternate alignments that could further minimize adverse impacts on Connecticut's coastal resources and water-dependent uses while still meeting the stated project goals. As we have discussed with you, the Department can only authorize that alternative with the least impact. In order for the Department to determine that the alternative with the least adverse environmental impact has been proposed, the following additional information is necessary.

- 1 While you have provided bottom characterization surveys, marine geophysical surveys and video analysis of the proposed work corridor, and some level of detail for Option 2 and Option 3, we do not have this level of information from other alternative routes which you considered and dismissed. Please provide the Department with an identification of all of the other alternate routes and alignments considered and a summary of the environmental advantages and disadvantages associated with each and the reasons why the alternatives were rejected.
2. Please provide a detailed analysis of alternative alignments across the Sound that would take maximum advantage of corridors that were previously disturbed by infrastructure or other past or present uses. For example, it does not appear that you have considered installing a new pipeline adjacent to the existing Iroquois Gas Transmission System pipe off of the Milford shoreline. Because of this previous disturbance, another pipeline routed through the same area may result in less additional habitat disruption and overall environmental impacts to Long Island Sound than the currently proposed pipeline route/alignment.
- 3 Please provide a full evaluation and analysis of the environmental impacts of the ELI System Alternative which was found to be the environmentally preferable alternative in FERC's *Islander East Pipeline Project – Final Environmental Impact Statement*.
4. Please provide a thorough evaluation and analysis of the environmental impacts of an option that employs the Long Island Sound portion of the recently withdrawn Iroquois

ELI Extension Project which would now appear to be an option available to Islander East and which also appears to have less environmental impact on Long Island Sound, overall, than your current proposal

5. Department staff have reviewed the proposed route research cited by your consultants and have compiled a list of those references and documents that may aid the Department in evaluating alternative routing or alignments. Please provide the enclosed "References to be Submitted", along with any more recent related applicable documents, including maps or surveys.
6. Please provide the Department with a color copy of the *Marine Geophysical Survey Program - Islander East Pipeline Branford, CT to Wading River, NY* prepared by Ocean Surveys and dated May 18, 2001. In this report, it appears that the Option 2 route alternative which is slightly shorter than the proposed route would be feasible and would impact less area of shellfish beds. In sum, this option would have less overall in-water disturbance. The study indicates that there are no magnetic anomalies in Option 2 while there are 31 anomalies in Option 1. Further, it states that the chances of encountering bedrock along either route are similar. Please explain why this option was dropped from consideration.
7. Staff have reviewed the *Analysis of Video Records of Sea Floor Features Collected by Remotely Operated Vehicle Along the Proposed Islander East Gas Pipeline Corridor in Long Island Sound* by Roman Zajac and dated August 2002. Please indicate if this type of analysis has been done elsewhere along the Connecticut coastline. If so, please provide such information.

Marine Habitat

8. The Thimble Islands region is generally considered to be an area of exceptional marine habitat diversity. Please provide the Department with a thorough evaluation of the short and long-term impacts, both direct and indirect, of constructing and operating a pipeline in this unique area of the Sound.
9. The currently proposed backfill plan includes a backfill tolerance of +2'/-1' from the ambient seafloor. Please include a discussion of environmental impacts on marine resources and water dependent uses associated with the proposed grade variations. Also discuss the impact of anticipated levels of suspended sediments on marine organisms and habitats in the zone of influence of the project, particularly in light of the exceptional diversity and sensitivity of the marine resources in the Thimble Islands region referenced above.
10. Typically, naturally occurring eastern oysters (*Crassostrea virginica*) are found in areas which are comprised of hard benthic substrate from the intertidal area to depths of approximately -35', while commercial oysters are grown to depths to -50'. It appears that the proposed construction methodology would cause irreversible adverse impacts to approximately 38 acres of hard benthic substrate- habitat which is critical for oysters. This area of direct impact was determined by calculating the trench width and spoil

mound corridor between the horizontal directional drilling (HDD) exit pit and the -50' depth contour. This number does not include the area impacted by anchor strikes and cable sweep. Please indicate if you concur with the total acreage of irreversible habitat loss. If you disagree with this calculation, please explain the reasons and provide your calculated area of impact.

- 11 As you know, staff of CT's Department of Agriculture, Bureau of Aquaculture have indicated during recent meetings that in-kind restoration or mitigation of the damaged oyster habitat is not likely feasible due to the nature of the sediment proposed to be disturbed. Please provide a compensation plan for the loss of the hard benthic substrate habitat. This plan should include possible off-site restoration projects.

Alternative Techniques

While Islander East Pipeline Company, LLC has recently discussed modifications in installation methodology which could reduce water quality impacts, there are additional technologies which must also be evaluated and employed, if practicable, to further reduce direct benthic impacts associated with the proposed anchor system and exit hole footprint.

12. Please provide this Department with a detailed alternatives analysis which includes a discussion of employing live-boating, spuds, and/or semi-permanent helical anchors instead of utilizing the proposed 10-point lay barge anchor system for all or a portion of the work. In this analysis, please include any industry experiences where these alternate technologies have failed or succeeded.
13. As you are aware, Iroquois Gas Transmission System's Eastchester Extension project in New York successfully used sheetpile bulkheading at the exit pit to reduce the size of the footprint. Please discuss and address the feasibility of this alternative.

Horizontal Directional Drilling

14. The Department's experience with HDD applications in Connecticut and elsewhere is that there are often complications during construction such as drill hole failure. As you are most likely aware, once this Office authorizes construction techniques for a particular location, the authorization is not applicable to other locations or variations in technique. Therefore, in the event of complete HDD failure, please identify and provide necessary information regarding alternate locations and installation techniques for possible conditional authorization from this Office. If conditional locations and techniques are not approved up-front, significant delays or total project termination could result.
15. As currently proposed, the HDD activity puts some town shellfish beds at risk in the event that a frac-out (release of drilling fluid) reaches the benthic surface. Please explain why HDD was not sited within the footprint of the Tilcon Channel to minimize adverse impacts to existing shellfish beds associated with the potential for frac-outs.

Backfill Plan

16. As discussed at the April 15, 2003 technical meeting, please provide a bottom velocity study to determine if the currently proposed backfill sediment will be subject to erosion. Also, please explain why the dredge spoil cannot be temporarily stored during construction and reused as backfill for the dredged trench subsequent to installation of the pipeline.
17. Also discussed at the April 15 technical meeting was a discrepancy regarding the depth of backfill on the engineered backfill plan sheet SK-19. Please correct the depth discrepancy.
18. At this time, DEP staff do not anticipate additional sediment testing associated with the proposed dredging. However, please be aware that further modifications to the backfill plan may warrant additional testing.

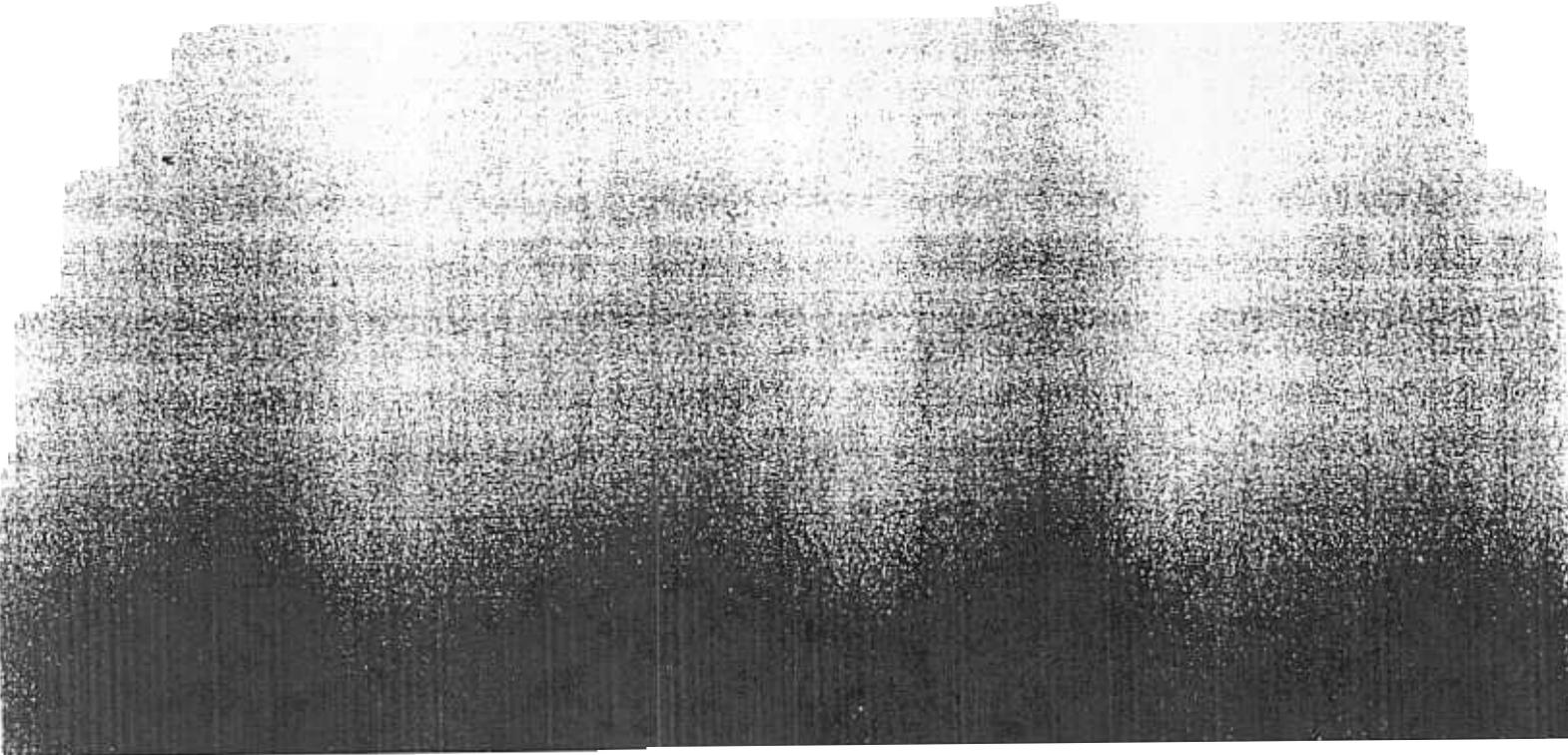
Tidal Wetlands

The proposed work will impact two areas formerly connected to tidal wetlands. You have identified these areas as wetland CT-A37 and a pond CT-A21. This Department will continue to review the pending application pursuant to C.G.S. 22a-32 as these areas appear to meet the definition of "areas formerly connected to tidal waters" as defined by C.G.S. Section 22a-30-2(g): *"those areas which have retained tidal wetland soil characteristics, which can support some but not necessarily all of the vegetation specified in section 22a-29 of the General Statutes upon re-establishment of a tidal connection, and to which a tidal connection can be re-established."* In reference to these wetlands, please address the following items:

19. In "Site-Specific Wetland and Waterbody Crossings" (Attachment C), dated July 2002, a note on page CT-WL-9.69 indicates that the existing pond will be drained. Other application materials indicate that no wetlands will be drained or permanently filled as a result of the Islander East Pipeline Project. In addition to clarifying this discrepancy, please provide this Office with a step-by-step construction methodology of both the wetland and pond crossing. Include cubic yards of material to be excavated, stockpile locations, and elevation details. Please provide detailed plans showing both the existing and proposed conditions of wetland CT-A37 and pond CT-A21.
20. Please update the "Impacts Analysis Report" by TRC Environmental Corp dated February 12, 2002. The document should discuss the currently proposed project. Specifically, the tidal wetlands information on page 13 needs to be updated.
21. The desired manner of wetland mitigation is on-site restoration. Please explore the possibility of returning tidal flow to wetland CT-A37. Additional information on the current health of pond CT-A21 is necessary prior to determining preferred mitigation options. Susan Jacobson will make arrangements to visit the pond with a staff ecologist to determine feasible mitigation.

APPENDIX J

Tilcon Barge Accident



From: "John B. Lust" <johnblust@rcn.com>
To: "Susan Jacobson" <susan.jacobson@po.state.ct.us>
Date: 1/20/03 11:36AM
Subject: Tilcon Barge overturns.

Hi Sue

I thought you'd appreciate this for the file.

John

----- Original Message -----

From: "William Horne" <william.horne@yale.edu>
To: <johnblust@rcn.com>
Sent: Friday, January 17, 2003 12:21 PM
Subject: Fwd:

> >Status:

> >

> >Attached is the overturned Tilcon barge today, January 17, 2003, being
> >recovered in the Thimble Island harbor, the proposed site of the Islander
> >East
> >pipeline. I think it is important for public officials to come today to
> >witness
> >the severity of these accidents and its potential devastation to a gas
> >pipeline
> >in this area. Dr Bohlen testified in the CSC hearings that no barges have
> >overturned. This is the second one that I have photographed in three
years.

> >

> >Becky Mars

> >

> >

> >

