creatures that have very high loads of, in this case, copper, although we don't know what else is in the sediment there.

And so this is a concern. I don't -- I don't personally know what kind of effect copper has at high levels on Harbor Seals or on osprey, for that matter, so that that takes it to another question which is, who is doing the sediment testing? Who is doing the corings testing?

Personally, I would like to see a

group that does the testing that is not affiliated with Islander East, Energy, Algonquin, or receives grants or funding, or any other sort of input from any of these companies. If this means that we have to go to Massachusetts or Rhode Island or SUNY New York or something along those lines, I think it would be in the best interest to make sure that the testing is done by someone who has no interest in Duke, Algonquin, Islander East or

KeySpan.

Islander East has said that they do testing, and I'm curious as to what happens. Do they have a level that they consider too high? Is there a point where they say, you know, there's just too much copper. We're not going to do it here. What is that level and what do you do when you get to that level? And have you ever gotten to a level where you say no, we're not going to do it here because there's too much mercury, or too much PCBs, or too much

copper? So -- let's see. I just want to make sure that I got everything here. I think that that pretty much sums it up. Yeah. Yup. I think that's pretty much it.

Do you have any questions?

MR. NELSON: In your discussions with the maritime center, did they give you any indication of the seal population historically? And has it, you know, what's happening with it

program. Is your question specific to --

CHAIRMAN SHAPIRO: I'm just saying pick a town, North Haven, Hamden where you have an existing pipeline.

MR. GALLIGAN: Is it budget specific to a town or is it a program overall?

MR. LUSKAY: It is structured so we can do a program each year with a group of towns and cover several locations. And then, we also have the budget is based on doing an annual program with a group of towns. And we do do a different group each year. And we also have money within our budget in order to accommodate any individual training or requests that are out there. And when we do get a request for some additional training, we're more than happy to provide it

CHAIRMAN SHAPIRO: So which towns might you cover specifically, personally, in your responsibilities for training?

MR. LUSKAY: Currently?

CHAIRMAN SHAPIRO: Yes.

MR. LUSKAY: It is from the Hudson River in New York to Burrville (phonetic), Rhode Island. And we break those into groups.

CHAIRMAN SHAPIRO: Hudson River to Rhode Island?

MR. LUSKAY: Uh-huh.

CHAIRMAN SHAPIRO: And what might be the order of magnitude in your budget for?

MR. LUSKAY: Offhand, well, we take a section of that and do it each year. We'll get some type of a banquet facility somewhere in the middle of those towns that we select, as a group, and put on our demonstration. So it's really for those -- for the support type needs that we have. And it's in the matter of a few thousand dollars each year.

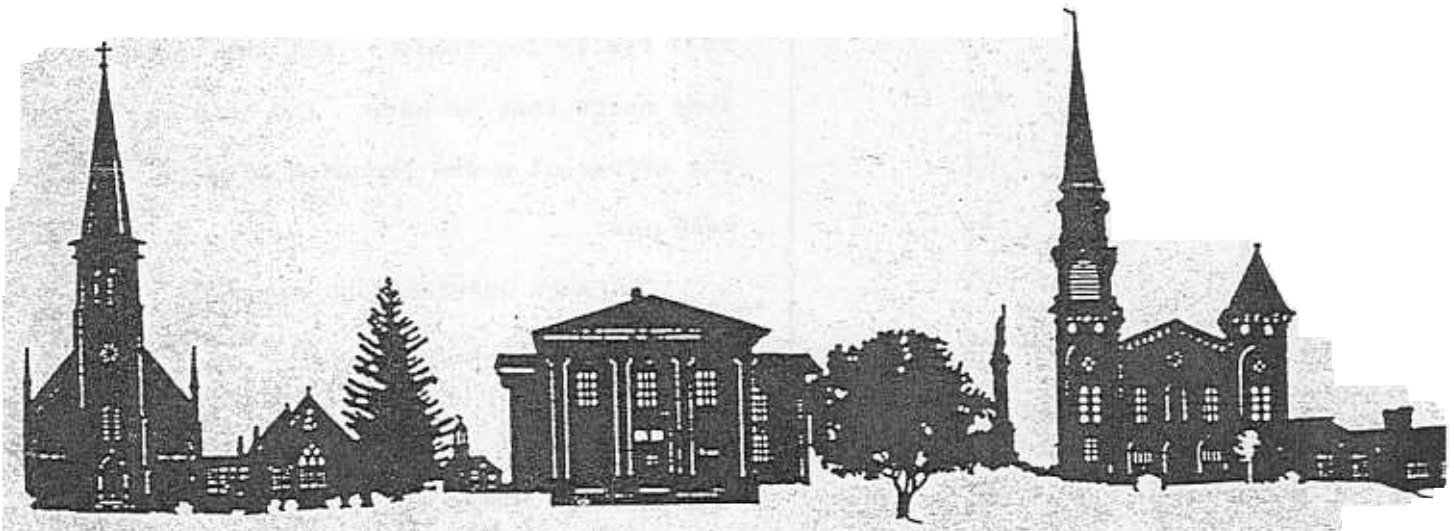
CHAIRMAN SHAPIRO: So several thousand?

MR. LUSKAY: Yes.

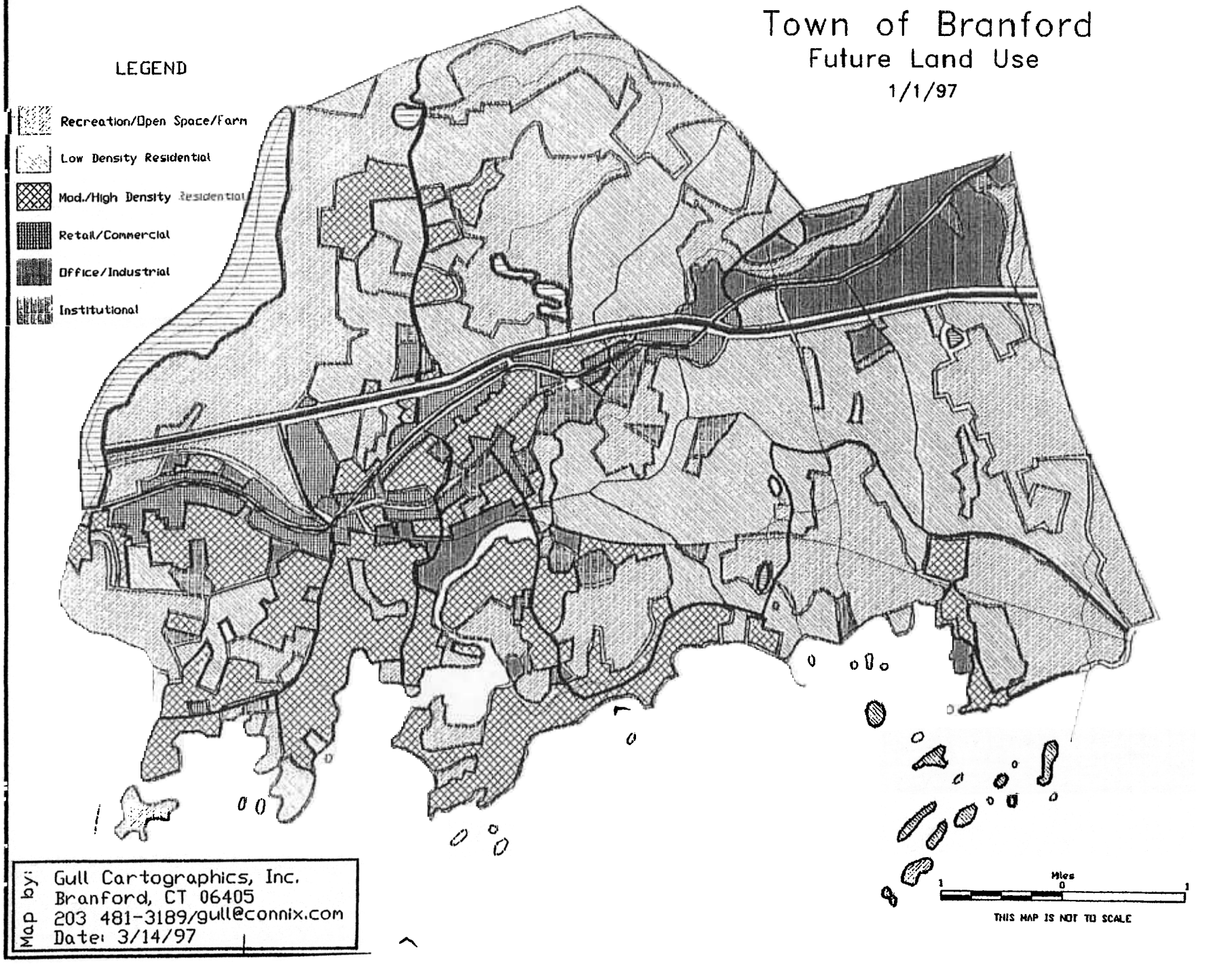
Attachment

PLAN OF CONSERVATION AND DEVELOPMENT

TOWN OF BRANFORD CONNECTICUT



ADOPTED JANUARY 16, 1997


Town of Branford
Future Land Use
1/1/97
LEGEND
Recreation/Open Space/Farm
Low Density Residential
Mod./High Density Residential
Retail/Commercial
Office/Industrial
Institutional
Miles
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THIS MAP IS NOT TO SCALE
Map by:
Gull Cartographics, Inc.
Branford, CT 06405
203 481-3189/gull@connix.com
Date: 3/14/97

1 November 2001

Mr. Danny Shapiro, Chair
Blue Ribbon Commission
Branford Town Hall
Branford, CT.06405

Re: Islander East Pipeline Company

Dear Chairman Shapiro,

Please accept this analysis of the environmental impact of the gas transmission pipeline described in the application by Islander East, LLC, to the Connecticut Siting Council. I have performed this analysis as a Duly Authorized Inland Wetlands and Water Courses Commissioner in the Town of Branford.

In addition, I am employed as the Deputy State Entomologist at the Connecticut Agricultural Experiment Station and am currently vice president of the Connecticut Botanical Society, former treasurer and 30 year member of the New Haven Bird Club, board member of the CT Ornithological Association, vice-president and co-founder of the CT Butterfly Association, which additionally supports the preservation of dragonflies, member of the CT Herpetological League, member of the State of Connecticut Invasive Plant Work Group, member of Citizens of Branford's Environment, and advisor to The Branford Land Trust.

The Inland Wetland and Watercourses Agency in the Town of Branford is mandated by the State of Connecticut General Statues (Sec 22a-45c) to "make provisions for the protection, preservation and maintenance of inland wetlands and watercourses with the highest standards set by federal, state or local authority, preventing the loss of fish and other beneficial aquatic organisms, wildlife and vegetation and the destruction of the natural habitats thereof. Our Inland wetland regulations are based on a model provided by the general statues that follows:"

The State of Connecticut Inland Wetland Statutes. Sec. 22a-36 , :
"Inland wetlands and watercourses. Legislative finding. The inland wetlands and watercourses of the state of Connecticut are an indispensable and irreplaceable but fragile natural resource with which the citizens of the state have been endowed. The wetlands and watercourses are an interrelated web of nature essential to an adequate supply of surface and underground water; to hydrological stability and control of flooding and erosion, to the recharging and purification of groundwater, and to the existence of many forms of animal, aquatic and plant life. Many inland wetlands and watercourses have been destroyed or are in danger of destruction because of unregulated use by reason of the deposition, filling or removal of material, the diversion or obstruction of water flow, the erection of structures and other uses, all of which have despoiled, polluted and eliminated wetlands and watercourses. Such unregulated activity has had, and will continue to have, a significant adverse impact on the environment and ecology of the state of Connecticut and has and will continue to imperil the quality of the environment thus adversely affecting the ecological, scenic, historic, and recreational values and benefits of the state for its citizens now and forever more."

I. <u>Disregard for Branford's Inland Wetlands Regulations</u>.

Islander East's application to FERC displays a blatant disregard for our town's natural resources, especially our non-renewable inland wetlands. The objectionable features include, but are not limited to:

a. a failure to provide a plan of environmental mitigation that adequately protects these fragile ecosystems according to the standards set by the regulations of the

Town of Branford's Inland Wetlands and Watercourse Agency (IWWA) and the State of Connecticut Department of Environmental Protection.

b. a failure to identify and protect state-listed Endangered, Threatened, and Species of Special Concern that utilize this open space wetlands and forested buffer corridor along the Tilcon railroad for food, shelter and nesting, as an overwintering site, and as a valuable coastal refuge for migratory birds, butterflies and dragonflies..

c. a failure to provide for "no net loss policy of inland wetlands" as required by federal, state and town inland wetland regulations.

d. a failure to provide the IWWA with the required 2-foot contour interval maps with designated wetland delineation marker flags so that the Inland Wetland Commission may conduct a thorough evaluation of the potential damage to the wetlands.

e. a failure to provide an environmental impact study to the Town of Branford, the Conservation Commission and to the IWWA that would allow these agencies to determine the extent of environmental impingement of our wetlands, wildlife and other natural resources.

f. a failure to consider sufficient alternate routes to, or variations within, the Tilcon railroad corridor.

g. a failure to consider feasible and prudent alternatives to the permanent destruction of inland wetlands and upland ledges and preserved open space.

h. failure to consider the Town of Branford's Inland Wetland Regulations' standards concerning impacts to wetlands, avoidance of wetlands, no net loss, feasible and prudent alternatives, 2 to 1 wetland compensation for wetland disturbances and best management practices.

An appeal was made to Islander East's representatives, by me, at the end of a public hearing held by the Town's Blue Ribbon Committee (10 October, 2001) to comply with the Town of Branford's Inland Wetland Regulations, which are based on the CT Department of Environmental Protections Model (please see attached copy). In addition, I asked them to work with the Inland Wetland Commission to find alternatives to lessen the impact of their proposals. Islander East has failed to improve or to offer mitigation for wetland crossings that would permanently alter and perhaps destroy the dynamic functions of these ecosystems.

The proposed route along the Tilcon railroad line criss-crosses the rail line, avoiding uplands and ledges and keeping the pipeline purposefully in the wetlands. No justification for this practice has been given and no feasible and prudent alternatives were forthcoming from Islander East , despite numerous complaints about the proposed destruction of wetlands and vernal pools.

The following are three particularly egregious examples of unacceptable pipeline crossings that would destroy high quality fragile wetland ecosystems consisting of wetland shrub swamps, vernal pools and forested wetlands with flowing watercourses.

1. A proposed wetland and vernal pool crossing occurs just north of Pleasant Point Road and east of the railroad tracks, in a large red maple-tupelo forested swamp (wetland A34). Numerous tree buttresses provide evidence of significant seasonal flooding and are often 2 to 3 feet in height. Sphagnum moss often occurs on the roots at this height, indicating long periods of standing water. Many large depressions contained gray-stained leaves that are indicative of vernal pools. The EPA considers vernal pools to be of such importance that individual permits are required from the Army Corps of Engineers "regardless of the size of the impact because of the significant wildlife functions provided by vernal pools". On the west side of the tracks, there is a wide (30-40 feet) grassy strip that borders the tracks with wooded upland to the north. This wooded area is not a wetland area and was not considered as a feasible and prudent alternative.

2. An unacceptable proposed wetland infringement is at the midpoint between Route 146 and Gould Lane, on the west side of the track. This wetland occurs adjacent to the

railroad track. On Sunday October 7, 2001, I observed pools of standing water more than 1.5 feet deep and flowing watercourses more than 1 foot deep within 25 feet of the tract. At a point within 5 feet of the railroad embankment, while looking for marbled salamander eggs in the pools, I sank into muck up to my knees in totally hydrated soil and needed an overhanging tree branch to help me out. On the opposite side of the railroad track was a ledge, and upland forest. This wooded area is not wetland and was not considered as a feasible and prudent alternative.

3. A third proposed wetland crossing that failed to consider a nearby alternate route is where the pipeline crosses Route 1 on the east side of the track, continues around the east side of building where Islander East has its offices and crosses the Branford River and a shrub swamp and a cattail marsh on the river's north side at the absolute widest point possible. An alternate route is to cross Route 1 on the west side of the track and go over a field and cross Branford River where there are no adjoining wetlands. .

This application indicates crossings of other wetlands that would also be severely impacted. However, these three examples of deliberate disregard for Branford's non-renewable wetland resources stand out because of the glaring feasible and prudent alternatives that can be utilized by merely crossing over the railroad tracks.
In many cases Islander East's proposal of a 40-foot open canopy corridor would totally eliminate some of the narrower wetlands that occur along the raised bed of the Tilcon railroad. This raised quarry railroad bed was created in the early 1900's and has created a viable functioning wetland ecosystem in these low depressions within the last 90 or more years. Islander East proposes a 10-foot wide herbaceous strip in the wetlands and watercourses. In addition, they propose to cut the wetland canopy 15' on either side of this border to stumps that would be allowed to grow into small shrubs. The wetland would be additionally disturbed and maintained by cutting any new growth every 3-4 years. This 40 foot open canopy with its 10-foot wide herbaceous strip would disrupt the hydrological functions of the wetland by increasing the soil temperature, enhancing evaporation and detrimentally impacting the plants and animals that currently occupy these shaded closed canopy wetlands and watercourses. This disturbance and additional light conditions would allow invasives species to take over, replacing the native flora and the wildlife that depend on them and reducing the overall biotic diversity.

The argument provided by Islander East for such a wide disturbed area is that it is necessary for routine surveillance of the pipeline. However, the US Department of Transportation Research and Special Programs Administration states in 49 CFR, 192.705, "Transmission lines: Patrolling: (c) Methods of patrolling include walking, driving, flying or other appropriate means of traversing the right-of-way." There are no regulations that stipulate the width of the pipeline right of way (ROW). A narrower ROW with a closed canopy, would be less intrusive upon the environment, especially if the pipe itself were 25 feet or less from the railroad track and the width of the cut area was restricted to about 5 feet immediately above.

II. Environmental impact on nesting birds and other wildlife species

The Islander East's application has failed to consider the impact on nesting birds and wildlife that breed within this green corridor that runs the length of the Tilcon tracks in Branford.
This green corridor of uplands, ledges and wetlands is along a migratory route for species moving south for the winter and acts a stopover for exhausted northern migrants. On my visits of October 7th and October 25th, I saw the first of the great numbers of northern species that move into these refuges for the winter. There were flocks of hundreds of birds such as Northern juncos, White-throated sparrows, Brown creepers and Yellow-rumps. Species moving south were Phoebes, blue jays, flickers, Purple finches, Cooper's hawks, Red-shouldered hawks, Yellow-rumped warblers, Common Yellowthroats, Northern parulas and Yellow warblers. Because it is a coastal refuge, many of these migrants remain and feed in this area during mild winters. Other migrants moving south along the corridor included Monarch and Red Admiral butterflies and 4 species of

dragonflies. Local year-round species include chickadees, Tufted titmice, Hairy, Downy, and Red bellied woodpeckers, and White-breasted nuthatches. Spring peepers, responding to the length of daylight that equaled that of their spring breeding season, were calling in great numbers in the wetlands. Turkeys, rabbits, gray squirrel, deer, fox, chipmunks, and coyotes have been observe in these green corridors and use them as a means to travel to other open space areas that are scattered among highly developed suburban and commercial surroundings.

The following list of species seen in this area was derived from:

1. twenty-three years of Christmas Bird Counts in the vicinity of Route 139
2. individual birding field trips by me,
3. personal communication from Dr. Noble Proctor, a 40 year Branford resident, Professor of Ornithology at Southern Connecticut State University, and author of numerous textbooks on ornithology and natural history.

Species of Special Concern American Kestrel Hawks, seen on many Christmas coun near the Tilcon RR corridor near route 139.
Great-Horned Owl seen on the Goss property, these owls are territorial and do not migrate, most likely nest here.
Screech Owls 2 pairs nested spring 2001, one south of the railroad track at Pleasant Point Road and 1 pair approximately 300 yards north of the tracks from route 146.
Species of special concern Red-Shouldered Hawk nested in spring of 2001 in the vicinity of the Tilcon tracks and Pleasant Point Road.
Species of Special Concern, Sharp-tailed Sparrow, 5 birds feeding a few yards north o the Goss property.
Species of Special Concern Glossy Ibis, flock of 12 or more feeding across from Goss property.
Species of Special Concern, Eastern Box Turtle, in uplands on the Goss property.
Threatened Species, Cooper Hawk, a pair nested south of Pleasant Point Road spring of 2001, frequently observed hunting.
Threatened Species , Snowy Egret, seen using pond at the Goss property.
Threatened Species, Great Egret, seen feed across from the Goss property.
Threatened Species , Least Bittern, seen yearly during migration in the salt marsh across from the Goss property.
Endangered Species, King Rail , nested 2001 seen in the salt marsh across from Goss property.

Cutting and maintaining a permanent 50' wide upland ROW within a narrow forested corridor would in fact be detrimental to many species of wildlife. Any possible benefits to certain species of wildlife would be quickly negated by the quick spread invasive species, creating a monoculture and replacing native food sources. The forested upland and inland wetland corridor that spans the Tilcon quarry tracks is often not more than 150 to 200 feet wide in places. Opening a 50 wide swath within this buffer would be detrimental to the wildlife that use it. Studies (Noss 1987; Harris and Gallagher 1989; Lacasse 1994) found that wooded corridors counter the effects of forest fragmentation (commercial and suburban development) by connecting isolated tracts. Small mammals, with limited dispersal ability, will particularly benefit by the protected wooded corridors (Noss 1983, Yahner 1983, Yahner 1995). Forested and wetland corridors maintain connections between populations of forest wildlife that would otherwise be isolated. Corridors may maintain interconnected populations (metapopulations) in the long term, mitigating the negative impacts of inbreeding or genetic drift (Harris 1984, Noss 1987, Bennett 1990, Henein and Merriman (1990). Protecting existing corridors, such as "greenbelts" or "landscape linkages" also adds aesthetic value to the landscape.

These species that live and breed within these wetland corridors, need to be protected. The *Inland Wetlands and Watercourses Regulations of the Town of Branford* and the Connecticut General Statutes that regulate impacts on inland wetland recognize that these ecosystems are essential " to the existence of many forms of animal, aquatic and plant life."

III. Scheduling of Pipeline Installation

Islander East states in its application to the Siting Council that it plans to clear the vegetation of a 50' corridor of uplands and a 40' corridor of inland wetlands during the wet spring season and during migration and nesting season. This would have an unacceptable impact on the affected upland and wetlands. The Branford Inland Wetland Commission often requires any Inland Wetland disturbance to be done in the month of August when there will be the least amount of damage to these fragile ecosystems.

Many people proposing development in wetlands choose July and August to determine wetland species. This is inadequate and not acceptable as it does not consider the spring ephemeral plant species nor the vernal pool salamanders and frogs of which seven species in Connecticut are Endangered, Threatened, or Species of Special Concern.

IV. Vernal Pools:

A publication by EPA New England titled *Vernal Pools and the Federal Wetlands Regulatory Program in New England* reports that " projects that will affect vernal pools are required to obtain an individual permit regardless of the size of impact because of the significant wildlife functions provided by vernal pools."

During the first heavy rainstorm in March, and occasionally as early as mid-February, frogs, salamanders and toads return to vernal pools to breed from the upland forest as far away as 800 yards. Many species of salamanders live to be 15 to 20 years old and return to the same site yearly. Maintaining undisturbed, unfragmented upland forests and undisturbed corridors adjacent to these vernal pools is necessary to support those obligate vernal pool species (Demaynadier and Hunter, 1996). Michael W. Klemens, Ph.D, in "The Proceedings of a Symposium on Vernal Pools in Connecticut", stated that "amphibians dependent on vernal pools are among the most imperiled species in our region."

There are several locations of vernal pools within the forested wetlands that the proposed pipeline crossing or its 40-foot wide-open canopy will severely impact. Islander East has failed to provide an environmental impact study or determine which species of salamanders, frogs or toads breed and develop there. The preservation of these pools, which often dry up in the summer months, is critical to the continued survival of these amphibians. Five species of salamanders and two species of frogs are state listed as either Endangered, Threatened or of Special Concern. Disturbance of these pools could change the fragile balance of microscopic algae and small invertebrate life cycle that these amphibians depend upon for development. The actual installation of a pipeline and/or maintaining an open canopy within a formerly shaded forest can change the hydrology and biology of the vernal pools by raising the temperature and by increasing the evaporation rate. These changes increase the frequency of years when the pools dry out before the larval stages mature to adults in mid-summer and return to the uplands to live and feed on small invertebrates in understory leaf litter.

Many species of migratory birds feed and breed in the areas around vernal pools. Mourning warblers, Yellow warblers and Wood ducks are a just a few of the bird species to utilize these habitats. The Red-shouldered hawk, state listed as Species of Special Concern, nested in mid-April 2001 in the vicinity of the vernal pool along the Tilcon tracks and Pleasant Point Road woodlands. These wooded swamps and vernal pool-areas provide a food supply of snakes, frogs and small birds to feed these hawks and their offspring.

V. Staging Areas and Trench Spoil:

All staging areas and temporary trench spoil areas should be located 100 feet from all wetlands and watercourses. No construction should be initiated until a properly designed soil erosion and sedimentation control plan is approved by the Branford IWWA and is in effect. I am quite concerned about the amount of trench subsoil that will be displaced by 4 miles of 24" pipe. The displacement of this subsoil is 3.14159 cubic feet per 1 linear foot of pipe. Multiply this by 21120feet (four miles) and divide by 27 cubic feet (1 yard) and you end up with: 2457 yards of soil. To visualize this amount, an average size dump truck holds 15 yards of soil. Therefore, 163 dump trucks of sub-soil need to be removed from this property. Most of the property they have chosen to cross is inland wetlands, where no additional soil can be spread since that would be considered filling, which is illegal by state and town inland wetland regulations. Subsoil spread in uplands would destroy small animal and invertebrate habitat in forests. In ROWs, which are to be replanted, the subsoil would be substandard for the germination of native seed, and would be susceptible to erosion during rainstorms. There are similar concerns about the chipping of limbs of trees. Islander East suggests spreading or burying wood chips on the property. Decaying woodchips remove nitrogen from the soil. IE suggests liming and fertilizing ROWs. This would be detrimental to our native woody plants which like a poor soil and a low pH, and illegal in our wetlands.

VI. Non Native Planting:

All ROWs should be actively revegitated with native (to New England) grasses and wildflower seeds and they should plant native species of shrubs, so that there is no need to continuously cut the ROW. Studies show that a strong planting of native shrubbery and herbaceous grasses and forbs will out-compete invasives plant species (personal communication from Dr. Jeffery Ward, forester, at the Connecticut Agricultural Experiment Station).

Branford Inland Wetland Commission regulations state that all planted areas should have an 85% survival rate after five years. They must remove all invasive species during that time frame. Planting native shrubbery (viburnum, blueberry, hollies, mountain laurel, bayberry, etc.) will save time, money and there will not be a need to continually cut out trees to a level of 15 feet as these natives usually grow less than that. This planting plan could be used in wetlands as well. There are many wetland shrub species, such as sweet pepperbush, spicebush, upland blueberries, buttonbush, and winterberry that grow in hydrated wetland soils. This would preclude the need to continuously disturb the wetland by removing all trees above 15 feet.

VII. Construction time schedule:

There should be no cutting or construction between 1st March and 1st October . This will protect nesting owls and hawks, which nest late February through mid-April, and migratory birds, which are moving in and establishing nesting territories until about mid-May . This is the time vernal pools are being utilized, and the larvae and tadpoles don't mature until mid-summer. During this is time that mammals have their young. Many mammal mate in mid to late February and have a gestation period of about 63 days . They have their young about mid-April, and need to nurture their offspring until they are capable of caring for themselves, which is usually August or late September. Those rocky ledges provide den sites for coyotes, fox and skunks and opossums. Branford is so densely populated, 1000 people per square mile, that there is very little undisturbed open space for the survival of amphibians, birds, and mammals. Actually since this green buffer area is used as a migratory corridor, no construction should occur until after October. In really hydrated soils like the ones I sank up to my knees in, no work should be done except December to early February when the ground is frozen and the owls haven't yet nested. All cutting of trees to open canopy should be done when the ground is frozen to lessen impact of removal the cuttings.

VIII. Feasible and Prudent Alternatives

1. The number one feasible and prudent alternative is to find another route, ideally through Milford, as it is already an energy route that crosses Long Island Sound.

2. Drill under all sensitive ecosystems. If Islander East can propose to drill for more than 4,000 feet through granite to pass under the Tilcon shipping channel and some of the Town's oyster beds, then they can drill under wetlands. Wetlands sustain more life than almost any other ecosystem, including but not limited to rainforests. (Niering, 1991, Lisowski and Williams 1997). The continued existance of these assemblages of flora and fauna in densely populated coastal Connecticut requires that we protect these refuges and migratory corridors.

3. Avoid all wetlands by crossing over the tracks if there is a non-wetland alternative route.

4. Conduct routine surveillance of the pipeline by walking as opposed to flying over. US DOT regulations require inspecting only twice a year in a class 3 suburban neighborhood. A walking route could limit all inland wetland canopy openings to about 5 feet. If it the top two feet of fill over the buried pipe were crushed stone, (sold by Tilcon) this would provide an inert, weed free, non floating, non decaying, solid walking area and allow the movement of water through it. Trails could be placed immediately 25 feet off the rail line and often up against ledges which would save money and precious habitat from blasting. Walking trails are more visually efficient, less costly, conserve energy, and save precious refuges.

5. In addition, I propose that the pipeline be installed through the freshwater Phragmites across the tracks from the Goss Property. If this pathway was 5 feet wide, a minimum of two feet of fill were crushed stone, and the operation was completed in the winter months when the soil is frozen, I don't see any serious detrimental effects to that environment. If this is not an acceptable route for CT DEP then I suggest and alternate route of drilling under the pond at the Goss property rather than blasting out a route along the ledge, effectively cutting the property in half by putting in a 50 ROW. The Goss property is a classic Oak-Hickory Community with mature trees and acts as a green corridor for wildlife. A fifty foot cut through the center, as some areas are only 250 feet wide, would fragment it to the point it would have no value for bird nesting or wildlife breeding. That now functioning land preserve serves many species of wildlife. A 50 foot swathe through it would create 4 edges and create a hostile environment for nesting and breeding species. In addition, invasive species that now only occur on the edge near the railroad line, since they are shaded out by a heavy mature canopy would quickly become monocultures in an open canopy. See references under II. Environmental impact on nesting birds and other wildlife species.

Very truly yours,

Carol R. Lemmon
12 Coachman Drive
Branford, CT 06405

References:

Section II. Environmental impact on nesting birds and other wildlife species

Bennet, A.F. 1990. Habitat corridors and the conservation of small mammals in a fragmented forest environment. *Landscape Ecol.* 4. 109-22

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Section **IV.** Vernal Pools:

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The Protection of Vernal Pool Ecosystems (Draft-revised 4/20/00) The Guilford Conservation Commission, 31 Parks Street Guilford, CT 06437

VIII. Feasible and Prudent Alternatives

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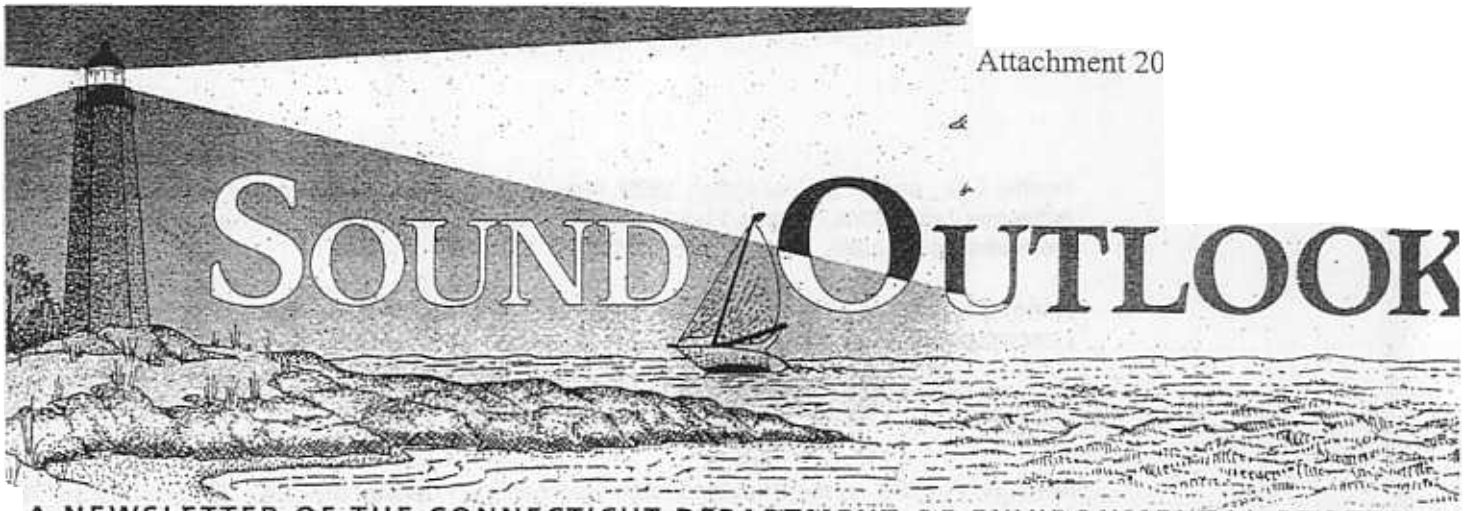
Attachment 20



SOUND OUTLOOK

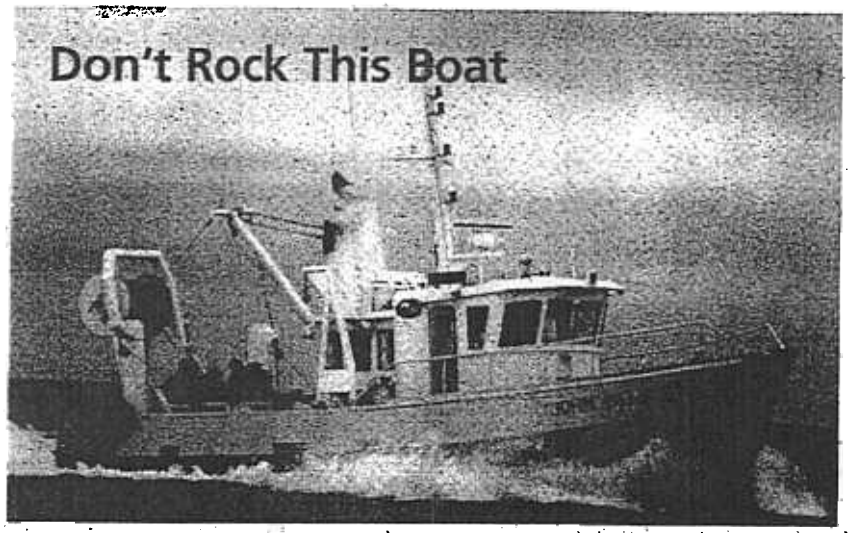
A NEWSLETTER OF THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTIO

Inside

OCTOBER 2001

No. 8

Don't Rock This Boat



R/V John Dempsey *plies the waters of Long Island Sound.*

One of the largest and most important pieces of equipment in the DEP's inventory for monitoring the health of Long Island Sound is the Research Vessel *John Dempsey*. Our understanding of LIS relies on data and information that has been collected from its waters in locations accessible only to a boat of the *Dempsey's* size and capabilities. The 50-foot long *Dempsey*, built specifically for the DEP's research and monitoring activities in the Sound, was named in honor of Connecticut's 66th governor (1961-1971), who launched the fight to clean up Connecticut's waters with the formation of the Clean Water Task Force in 1965 and the state's Clean Water Act in 1967.

One project in which the *Dempsey* plays an essential role is the DEP's annual Marine Resource Survey. The Survey monitors the abundance of over 40 fish and invertebrate populations in Long Island Sound using data from more than 200 bottom trawl samples taken by the *Dempsey* every spring and fall. The abundance and distribution of important finfish, squid, and crustaceans (lobster and crabs) in the Sound are monitored in order to develop management plans and regulations for those species. The *Dempsey* also participates in the DEP's Summer Hypoxia Survey, part of the broader, year-round, Long Island Sound Water Quality Monitoring Program. Bi-weekly surveys begin in mid-June and end in mid-September, sampled over an averag The *Dempsey* is also us cooperative research pr resource agencies and u including side-scan SO sediment sampling of th

The *Dempsey's* home Lyme at DEP's Marine I it is frequently berthed i when conducting sampli the required survey worl the western half of the S which was placed in ser 1990, is normally manne two, with other workers trawl surveys and water programs. The *Dempsey* of LIS every month of t all kinds of weather and The ruggedness of the b proven on a cruise last F waves crashing over the half inch of ice forming superstructure and railin crew delivered staff and designated sampling site and safely back to port a

This vessel has truly b to the DEP and other are helping us to understand its resources. For more ir *R/V John Dempsey* and r activities, contact Dave S DEP Marine Fisheries Di **david.simpson@po.stat**

→ Anadromous Fish Population Restoration - An Upda

Anadromous fish habitat restoration is an important part of resource management at the DEP, and a main focus of the Long Island Sound Study. Over 35 miles of natural riverine migratory corridors have been reopened as part of the Study's 10-year initiative to improve anadromous fish runs in Connecticut. The re-opening of these corridors through the removal of obstacles, construction of fishways, and alteration of dam releases represents significant progress toward the LIS Study's Habitat Restoration Initiative goal of restoring 100 river miles of natural habitat by the year 2008. The expansion of anadromous habitat helps to ensure the future reproductive success of species such as alewife, American shad and Atlantic salmon, which mature and live in salt water but must return to freshwater to breed.

The DEP's Marine Fisheries Division conducts annual statewide inventories of fish runs to prioritize existing and potential locations for habitat restoration projects. Fish counts taken at fishways throughout the state indicate that runs of blueback herring and alewife in the Connecticut River remain at very low levels. Connecticut's shad run has improved since the late 1990s, but their numbers remain below the boom seen in the 1980s. Numbers of Atlantic salmon in Connecticut and elsewhere in New England are down as are those of gizzard shad (probably due to winter mortality), while sea lamprey numbers have increased. These fluctuations in annual populations point to the continued need for management strategies which include a combination of habitat protection and restoration, along with promulgation of rules and regulations to protect the resource.

Fisheries biologists work closely with staff from the DEP's Bureau of Water Management and Office of Long Island Sound Programs to protect fish runs in watercourses subject to dredging, filling and bridge construction or demolition.

The DEP also works to d legislation and regulation of anadromous fish in sta ensure stock health and v Connecticut and New Yo legislation establishing a the use of purse seines in Sound because this type has indiscriminately capt thousands of anadromous through LIS on their way breeding grounds. Since has also established fishi the catch of blueback her alewives in all tributaries Connecticut River and a mainstem Connecticut Ri Hartford area in the hope future population number information about DEP's management efforts can b website at **www.dep.state.ct.us/bur fdhome.htm**.

Branford Land Trust
Submission to the Town of Branford Blue Ribbon Committee

Re: Islander East Natural Gas Pipeline

The Committee indicated three areas to be addressed during these hearings: environmental, economic and community values. While the Land Trust's primary focus will be on environmental issues, we will also offer some thoughts about the pipeline's cost to the Land Trust's economic and social viability.

The Islander East Natural Gas Pipeline, if constructed as proposed, will cross three Land Trust preserves (NHV-169, NHV-175/NHV-182, NHV-194), and indirectly impact other nearby undeveloped wetlands and uplands, including a town-owned nature and recreation trail that is heavily used by residents of Branford and other towns in the region. Its environmental impact on the properties in question is a major concern, but the impact of the pipeline on the Land Trust's economic viability and the importance of protected open space to the community must also be considered.

Environmental Impact

Dedicated nature preserves such as the Land Trust properties along the route of the Branford Steam Railroad provide a variety of benefits to the community, the state and the Long Island Sound region, and these benefits will be enjoyed in perpetuity. The wetlands and woodlands purify the air and the water enhancing the community and protecting Long Island Sound. They provide buffers between residential neighborhoods and business or industrial areas, and recreational opportunities for residents. Wildlife finds food and shelter. Undeveloped corridors such as the one that runs along the Branford Steam Railroad track, provide animals with a way to move between larger preserves.

Our coastal region supports the largest human population in Connecticut and what preserved open space we have is fragmented and tucked between developed areas, making each preserve much more important than it would in a less developed area. This is particularly true of Branford, with a population density of over 1000 per square mile. **When its nature preserves, already sensitive because of their relative scarcity and small size, are invaded and further fragmented by development of any kind, wildlife and people lose.**

Two of the Land Trust properties that the pipeline is projected to cross are heavily wooded uplands and/or wetlands that will have 75 foot corridors clear-cut for the construction process. 50 foot-wide permanent right-of-way will then be maintained in a clear-cut state for the indefinite future. (In wetlands, 10 feet will remain completely cleared and an additional 10 fe on each side will have trees over 15 feet in height removed periodically.) **This represents a major change in the character of the each property and an absolute degradation of its**

environmental value. In the case of the third property, a buffer strip of trees surrounding will be reduced or removed to provide the proposed width of cleared right-of-way.

(Detailed biological inventories for each property are available in Appendix II.)

Gould Lane (NHV-169): largely a forested swamp with a shallow pond. The pond and w provide storage and purification of storm water runoff, and habitat for ducks, birds and w edge animals. While the proposed pipeline construction path crosses an open mowed area encroaches on the western edge of the pond, removing the entire woody edge, and withou careful attention to soil and erosion measures, could result in sedimentation of the pond.

Anderson Wilcox (NHV-175, NHV-182): construction is largely limited to the southern the property where the Tilcon line crosses Route 146 (a state-designated Scenic Road). A point there is a significant red maple-tussock sedge swamp with a mixed shrub swamp bo red maple, alder, sweet pepper bush, winterberry, willows and standing water. Red maple swamps are significant wildlife habitats, especially for nesting birds. More than 40 specie birds breed in red maple swamps including black ducks, wood ducks, catbirds, ovenbirds, variety of warblers. These swamps often contain vernal pools that are breeding sites for s salamanders and wood frogs, and foraging sites for larger mammals. The vegetation of th maple swamp indicates that in addition to seasonal flooding there is standing water preser causing organic matter to accumulate. This organic matter supports the mixed shrubs that a layer surrounding and beneath the tree canopy of the red maples.

These wetlands are highly dynamic ecosystems where a change in the hydrology can significantly alter plant and animal populations, to the point of causing the wetland forest

This red maple swamp has been designated as the staging area for the crossing of Route 1. This will involve the digging of a pit to accommodate boring under Rt. 146 and the stockp of rock and soil. A perennial stream (Stony Creek, milepost. 8.9) flows through the north end of this swamp, and its presence makes this a particularly unsuitable location for spoil and a drill pit.

Goss (NLV-194): this 15 acre property in Pine Orchard just off Scenic Route 146 is a clas oak-hickory forest community that provides important habitat for wildlife. There is a biologically diverse freshwater pond on the eastern edge. Several species that are state-list Threatened or of Special Concern have been sighted here including the great egret, snowy and Cooper's hawk (see Appendix II).

Great blue herons, green herons, back ducks, mallards, great egrets and snowy egrets use t pond. There is an abundance of aquatic plants, dragonfly and damselfly larvae, aquatic in such as back-skimmers and water striders and green frogs. It most likely serves as a verna in the spring.

The woodland provides food and shelter for fox, chipmunks, squirrels and other rodents, and for birds, such as wood ducks, wild turkeys, woodpeckers, blue jays and thrashers.

Decaying heavy leaf litter provides food and shelter to small rodents, amphibians, insects and arthropods which in turn provide food for larger mammals, hawks and owls.

The proposed pipeline route loops inland approximately 200 feet, cutting into the very heart of the mature woodland to bypass the Goss pond. Clear-cutting a 75 foot wide corridor along this steep slope, and the likely necessity of blasting through the ledge that is present, creates a challenge to avoid erosion and sedimentation of the very pond the looped detour was designed t protect. There is just no good way for locating a 75 foot-wide construction path here.

The processes proposed for the restoration of the "temporary" construction areas are grossly inadequate, especially with regard to the Goss property. The clearing would remove more than 60 trees 12" in diameter or greater (see Tree Census, Appendix III). The restoration process proposed (allowing trees to regrow from roots left in place during construction) would require decades to reestablish some semblance of the existing condition. In addition, this type of disturbance also encourages the establishment of rapidly growing non-native invasive plants which the Land Trust with help from local Boy Scouts and other volunteers)has been fervently battling in order to maintain native habitat on its properties. The existing Algonquin Gas Transmission Co. right of way on the North Branford Land Trust property (NHV-090) is severely impacted by invasive plants. The periodic mowing of the area used to keep the right of way cleared actually encourages their growth.

Thus, routing the pipeline through the Goss woodland fragments and changes the ecology and character of this nature preserve. It also crosses and recrosses the Around Branford Trail. This segment of the 28 mile trail will no longer pass through a secluded woodland, but will become a mowed utility right of way.

Despite Islander East's claim that they will provide a means of crossing the trail during construction, it is unlikely that traversing the construction site while work is in progress (which is the time of day that hikers use the trails) will be easy, pleasant, or even safe. Thus the trail is likely to be effectively severed while clearing, grading, blasting, trenching, and laying the pipe are in progress.

In the longer term, the **cumulative environmental impact** of constructing a utility right of way on dedicated conservation land is a critical concern.

This application makes two points clear: The first is that undeveloped areas are being targeted for utility right of ways regardless of their status as dedicated open space preserves. Islander East has proposed two alternative routes for this pipeline – the Short Beach Alternative running through public water supply watershed, the Land Trust's Short Beach Preserve and adjacent open space preserves in the most densely populated part of Branford, and the Sachem's Head Alternative, which crosses Branford Land Trust and Town of Branford preserves to reach neighboring Guilford, where it runs through Guilford Land Conservation Trust properties and the Cockaponsett State Forest on its way to Long Island Sound.

The conscious choice of undeveloped land, and in many cases dedicated conservation land, contributes to the increasing fragmentation and destruction of natural wildlife habitat. Perhaps on a regional scale this may not seem particularly damaging, but on a local scale this represents the destruction of critical, irreplaceable habitat.

The second point made by this application is that the presence of a utility right-of-way across dedicated open space or nature preserves creates a high probability of additional facilities in the future. This point is illustrated by the impact of the proposed Islander East pipeline on holdings of the North Branford Land Trust (NHV-087, NHV-090) and North Haven Land Trust (NHV-015). These properties are already crossed by an Algonquin Gas Transmission Co. pipeline. The Islander East project proposes taking additional area aside the existing right-of-way for the new pipeline. In addition, the temporary construction area is sited on the undisturbed land trust holdings, not on the already disturbed existing right-of-way, further increasing the impact on dedicated open space.

If the proposed gas pipeline were to be installed across Land Trust property, it is not far fetched to imagine that we could soon be hearing from Islander East or some other energy transmission company that the energy demands of Long Island require additional facilities that should then be sited along this increasingly industrialized corridor. Indeed, Islander East has already responded to a question about whether the proposed pipeline will have sufficient capacity to meet the predicted demand by stating that it will increase capacity by "looping", that is by installing a second pipe parallel to and connected to the first pipe. Thus, Islander East is already planning to encroach even further into the Land Trust's property.

The impact of even the single pipeline proposed in the application is a quantum leap from that of the existing railroad, nearly as great as if the proposed pipeline route were through a completely undeveloped area. The railroad corridor is narrow, more like a country road than an industrial site, and has a minimal impact on the surrounding undeveloped properties, including the Branford Land Trust preserves. Large trees growing beside the tracks form a nearly complete canopy over the track and shade the wetlands that are found in the adjacent areas. Removing these trees to a distance of 50 to 75 feet from the track will completely change the nature of the area to the detriment of the wetlands along this corridor.

Economic Impact

The Land Trust is a totally volunteer non-profit organization that depends for its support and existence on Branford residents, local foundations and businesses. Land is entrusted to the Land Trust with the expectation that it will be protected as open space for the benefit of future generations.

The Goss property was given to the Land Trust for the express purpose of permanent protection with a deeded restriction that limits the use of the property to conservation, education, and scientific purposes. If donors cannot be sure that Land Trust ownership of open space will permanently protect the land and the natural resources that it holds in trust for future generations, then donations will decline. Furthermore, **if Land Trust property becomes a regular or preferred target of federal, state or municipal takeover for whatever purpose, the Land Trust is at risk for losing its credibility as trustee. Its community support, the life-blood of volunteer conservation organizations, is threatened.**

Community Values

Even though it has a population density of more than 1000 people per square mile, Branford has managed to maintain some of its earlier rural character because of the action taken by dedicated individuals over several decades to protect open space throughout the town. The Branford Land Trust, founded in 1967, has been instrumental in this effort. The Land Trust, the Town of Branford and the State of Connecticut, working with the support of individuals in the community and local foundations and businesses, have developed a system of open space preserves throughout Branford.

As noted at the beginning, these open space preserves provide the community, the state and the entire region with several benefits. The wetlands and woodlands protect the air and water quality of our community and of Long Island Sound. They provide habitat for wildlife and recreation for our residents, and they are buffers between business areas, industrial corridors and residential neighborhoods.

Branford has consistently recognized the value of open space. The Town's Zoning, Subdivision and Inland Wetlands regulations acknowledge the value of buffers and require open space set-asides in subdivisions. The Town's Plan of Conservation and Development earmarks areas that are to be kept undeveloped. More than 1200 families and business belong to the Branford Land Trust. In this last year the Branford community overwhelmingly supported the Land Trust's protection of two new preserves by contributing more than $250,000 for their purchase.

The Branford community has worked hard with the Land Trust to protect our town's open space. The confiscation of that protected open space for a gas pipeline strikes a blow to our entire community.

Appendix I
Recommendations

Alternatives

The regulatory agencies that will rule on this application must consider alternatives beyond the narrow and unpalatable options offered by Islander East. One alternative route from the Algonquin facilities in Cheshire to Long Island Sound would be to follow the Amtrak corridor parallel to Interstate-91 from North Haven through Hamden to New Haven. This route passes through a truly industrial corridor with many more options for avoiding environmental resources along the way than are present in the route through North Branford and Branford. Islander East should be directed to evaluate this and other possible routes.

In addition, other gas transmission companies are reported to be preparing applications to the Commission for permits to construct pipelines from Connecticut to Shoreham, NY [see attached copies of articles from New England Gas Association News (March-April, 2001, issue) and The Hartford Courant (July 22, 2001 issue)]. At least one of these proposals, by Iroquois Gas Transmission System, L.P., will have significantly reduced environmental impact, since it involves running a lateral pipeline from the existing Iroquois underwater pipeline off shore of Milford, CT (Hartford Courant, July 22, 2001, and map provided by Iroquois). The Islander East proposal must be considered in conjunction with the other proposals if Long Island's needs for natural gas are to be supplied with the least environmental impact.

Construction and Post-construction Management

1. A permanently cleared 50 ft. wide right-of-way is excessive where the pipeline crosses dedicated conservation areas where construction activities that might endanger the pipeline would not be permitted. Narrow permanent rights of way (much less than 50'in width) should be required for sensitive areas including natural preserves.

2. Construction techniques developed for the installation of pipelines across hundreds of miles of unbroken forest is inappropriate for working in the midst of densely developed residential communities. Islander East has stated that construction techniques exist that allow work to proceed in narrow corridors where buildings have been erected right to the edge of an existing pipeline right of way. These techniques should be required if the pipeline must pass through permanently protected conservation land.

3. Large or unique trees, as identified by landowners, should be flagged and protected along th pipeline route, including on conservation land.