COHEN and WOLF P.C.
ATTORNEYS AT LAW

JULIE D. KOHLER

PLEASE REPLY TO: Bridgeport
WRITER'S DIRECT DIAL: (203) 337-4157
E-Mail Address: jkohler@cohenandwolf.com

February 16, 2016

VIA ELECTRONIC AND OVERNIGHT MAIL

Chairman Robert Stein
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Docket No. 461 - Eversource Energy application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a 115-kilovolt (kV) bulk substation located at 290 Railroad Avenue, Greenwich, Connecticut, and two 115-kV underground transmission circuits extending approximately 2.3 miles between the proposed substation and the existing Cos Cob Substation, Greenwich, Connecticut, and related substation improvements.

Dear Chairman Stein:

Enclosed please find one original and fifteen copies of the Town of Greenwich's Responses to the Council's Interrogatories and the Town's Pre-Hearing Submission, both dated February 16, 2016.

I certify that a copy has been sent on this date to all participants of record as reflected on the Council's service list dated February 1, 2016.

1115 Broad Street
P.O. Box 1821
Bridgeport, CT 06601-1821
Tel: (203) 368-0211
Fax: (203) 394-9901

158 Deer Hill Avenue
Danbury, CT 06810
Tel: (203) 792-2771
Fax: (203) 791-8149

320 Post Road West
Westport, CT 06880
Tel: (203) 222-1034
Fax: (203) 227-1373

657 Orange Center Road
Orange, CT 06477
Tel: (203) 298-4066
Fax: (203) 298-4068

Please do not hesitate to contact me if you have any questions regarding this filing.

Very truly yours,

Julie D. Kohler

JDK/lcc

cc: Service List *(Via Electronic Mail)*
Honorable Peter J. Tesei, Town of Greenwich (*Via Electronic Mail*)
John Wayne Fox, Esq., Town of Greenwich *(Via Electronic Mail)*
John Wetmore, Esq., Town of Greenwich *(Via Electronic Mail)*
Katie Deluca, Town of Greenwich *(Via Electronic Mail)*

WITNESS: **WITNESS PANEL**
REQUEST FROM: **CONNECTICUT SITING COUNCIL**

QUESTION:

The Town's Intervenor request form filed with the Council on January 11, 2016 states that more viable alternatives exist including improvements to the current substation located at Cos Cob. In light of Kenneth Bowes Third Supplemental Direct Testimony, dated January 5, 2016, which rejects the feasibility and reliability benefits of such improvements, please provide technical and cost back-up information to justify the Town's position.

RESPONSE:

In his Third Supplemental Direct Testimony dated January 5, 2016, Mr. Bowes testified that larger capacity transformers could not be installed due to space limitations at the Cos Cob substation. However, on December 15, 2015 the Town of Greenwich e-mailed multiple transformer manufacturers inquiring as to whether larger capacity transformers (two 80 MVA transformers) could be added within the dimensions of the existing Cos Cob substation. The Town provided the transformer manufacturers a copy of the drawings of the Cos Cob substation prepared by Eversource in response to OCC-062. In response, two manufacturers responded with the attached plans demonstrating that larger capacity transformers can fit within the dimensions of the existing Cos Cob Substation. The transformer plans from the two companies are attached as Exhibit A.

In light of the fact that it appears that larger capacity transformers with a total capacity of 160 MVA (two 80 MVA transformers) can be physically added within the existing Cos Cob Substation, and any such upgrades would cost substantially less than the Applicant's proposal, there may be cheaper and less intrusive alternatives to the construction of the proposed Greenwich Substation and new 115kV transmission line.

WITNESS: **WITNESS PANEL**
REQUEST FROM: **CONNECTICUT SITING COUNCIL**

The Town believes that alternative options to address the potential for distribution feeder overloads into the Prospect Substation, and the risk of transformer overloads at the Prospect Substation should be fully investigated by the Applicant, including whether the risk of such overloads is based only on 2013 system peak load, rather than updated actual peak load data from 2014 and 2015.

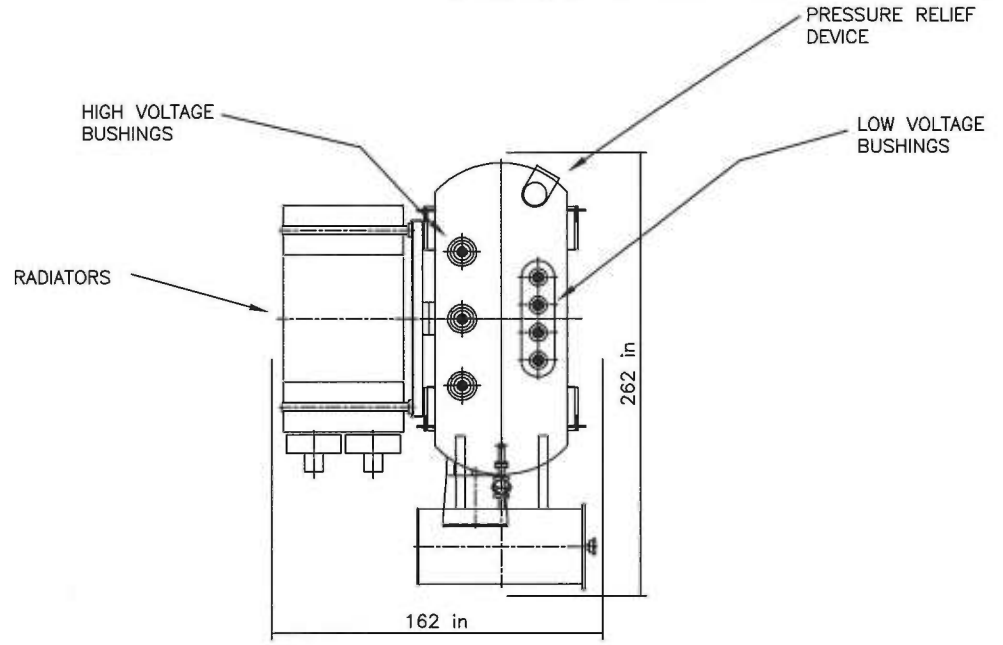
WEIGHTS	
TOTAL WEIGHT	197000 lbs

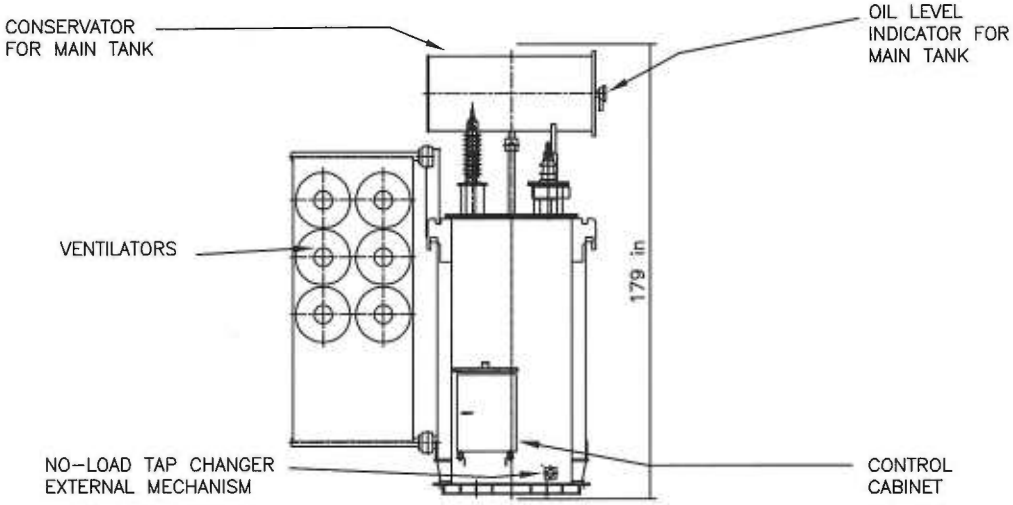
	N° DA REV./REV. NR.
	DATA/DATE
	FEITO/DRAFTED
	VERIF./VERIFIED
	APROV./APPROV.
	CONTEÚDO CONTENTS

REVISÕES/REVISIONS

N° DO DESENHO / DRAWING NR. Z4-3558789

REV./REV. O





ONAN/ONAF/ONAF-3PH-60Hz-48/64/80MVA-115kV±2x2.5%-27.6kV

PROJEÇÃO NO DIEDRO ANGLE PROJECTION	APROVADO APPROVED	VERIFICADO VERIFIED	FEITO DRAFTED
3º	Gustavo P.	Gustavo P.	Guilherme S.
ESCALA/SCALE			
UNIDADE/UNIT.			

TÍTULO / TITLE

EXTERNAL DIMENSIONS

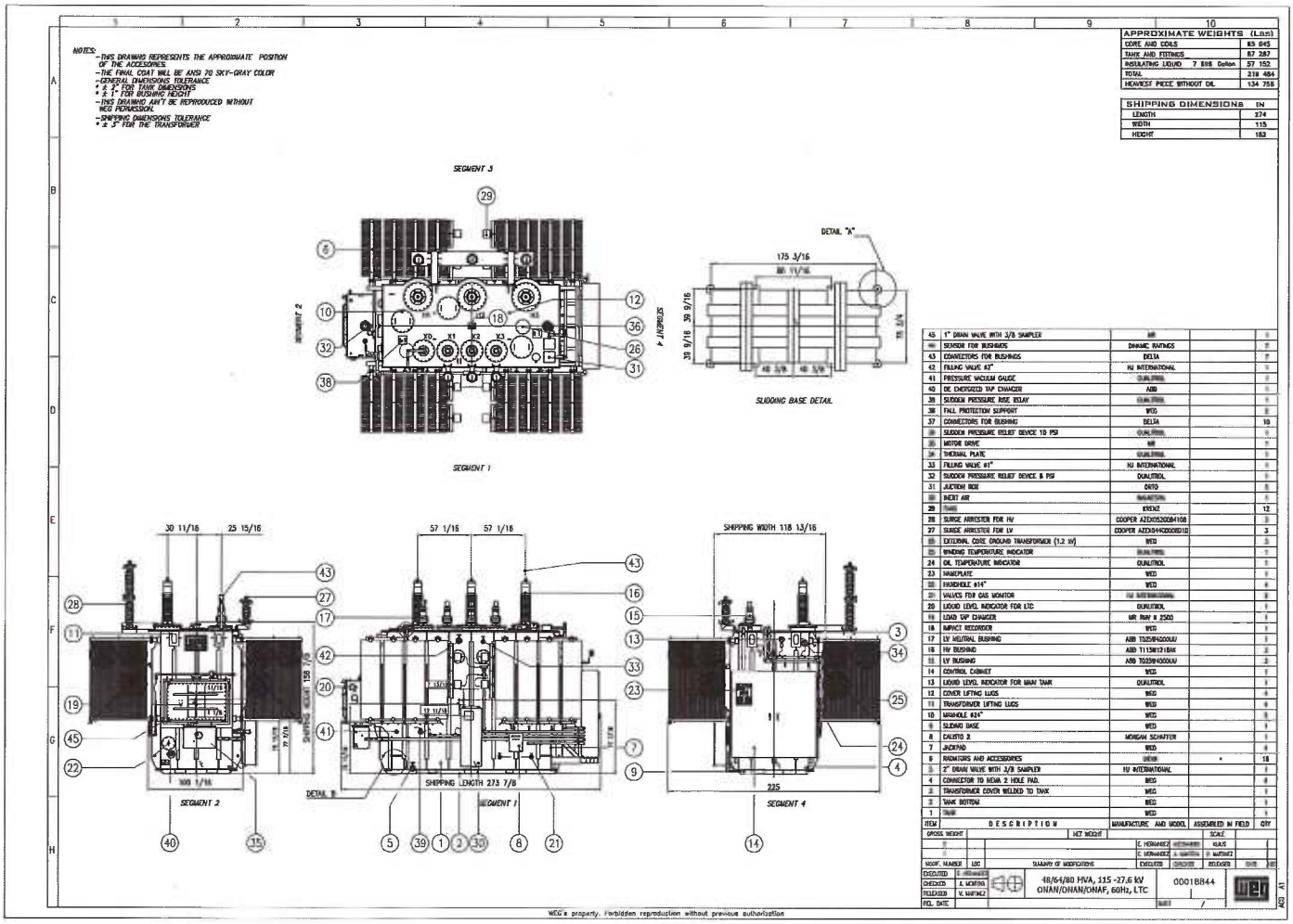
(ORIENTATIVE)

TOSHIBA
TOSHIBA AMÉRICA DO SUL LTDA

REGISTRADO / REGISTERED

N° DO DESENHO / DRAWING NR. Z4-3558789

REV./REV. O


NOTES:
-THIS DRAWING REPRESENTS THE APPROXIMATE POSITION OF THE ACCESSORIES.
-THE FINAL COAT WILL BE ANSI 70 SKY-GRAY COLOR
-GENERAL DIMENSIONS TOLERANCE
* ± 2" FOR TANK DIMENSIONS
* ± 1" FOR BUSHING HEIGHT
-THIS DRAWING AIN'T BE REPRODUCED WITHOUT WEG PERMISSION.
-SHIPPING DIMENSIONS TOLERANCE
* ± 3" FOR THE TRANSFORMER
SEGMENT 3
SEGMENT 2
SEGMENT 4
SEGMENT 1
DETAIL "A"
175 3/16
SLIDDING BASE DETAIL
30 11/16
25 15/16
57 1/16
57 1/16
SHIPPING WIDTH 118 13/16
SHIPPING LENGTH 273 7/8
SHIPPING WIDTH 138 7/8
100 1/16
225
DETAIL B
SEGMENT 2
SEGMENT 1
SEGMENT 4
APPROXIMATE WEIGHTS (Lbs)
CORE AND COILS 83 645
TANK AND FITTINGS 87 387
INSULATING LIQUID 7 898 Gallon 57 152
TOTAL 219 484
HEAVIEST PIECE WITHOUT OIL 134 758
SHIPPING DIMENSIONS IN
LENGTH 274
WIDTH 115
HEIGHT 182
45 1" DRAIN VALVE WITH 3/8 SAMPLER
SENSOR FOR BUSHINGS DYNAMIC RATINGS
43 CONNECTORS FOR BUSHINGS DELTA
42 FILLING VALVE 83" HJ INTERNATIONAL
41 PRESSURE VACUUM GAUGE
40 DE ENERGIZED TAP CHANGER ABB
39 SUDDEN PRESSURE RISE RELAY
38 FALL PROTECTION SUPPORT WEG
37 CONNECTORS FOR BUSHING DELTA 10
SUDDEN PRESSURE RELIEF DEVICE 10 PSI
MOTOR DRIVE
THERMAL PLATE
33 FILLING VALVE 81" HJ INTERNATIONAL
32 SUDDEN PRESSURE RELIEF DEVICE 8 PSI DUALTROL
31 JUCTION BOX DATO
INERT AIR
29 GASKET 12
28 SURGE ARRESTER FOR HV COOPER AZD053200B4108 3
27 SURGE ARRESTER FOR LV COOPER AZD044D00B01D 3
EXTERNAL CORE GROUND TRANSFORMER (1.2 W) WEG
WINDING TEMPERATURE INDICATOR
24 OIL TEMPERATURE INDICATOR DUALTROL
23 NAMEPLATE WEG
22 HANDHOLE 614" WEG 4
VALVES FOR GAS MONITOR
20 LIQUID LEVEL INDICATOR FOR LTC DUALTROL
LOAD TAP CHANGER MR Rmv II 2500
18 IMPACT RECORDER WEG
17 LV NEUTRAL BUSHING ABB T025H4000AU
16 HV BUSHING ABB T115H121BAK 3
15 LV BUSHING ABB T025H4000AU 3
14 CONTROL CABINET WEG
13 LIQUID LEVEL INDICATOR FOR MAIN TANK DUALTROL
12 COVER LIFTING LUGS WEG
11 TRANSFORMER LIFTING LUGS WEG
10 MANHOLE 624" WEG
9 SLIDING BASE WEG
8 CALISTO 2 MORGAN SCHAFFER
7 JACKPAD WEG
6 RADIATORS AND ACCESSORIES WEG 18
5 2" DRAIN VALVE WITH 3/8 SAMPLER HJ INTERNATIONAL
4 CONNECTOR TO NEMA 2 HOLE PAD. WEG
3 TRANSFORMER COVER WELDED TO TANK WEG
2 TANK BOTTOM WEG
1 WEG
ITEM DESCRIPTION MANUFACTURE AND MODEL ASSEMBLED IN FIELD QTY
GROSS WEIGHT NET WEIGHT SCALE
SUMMARY OF MODIFICATIONS
DESIGNED
CHECKED
RELEASED
REL. DATE
48/64/80 MVA, 115 -27.6 kV
ONAN/ONAN/ONAF, 60Hz, LTC
00018844
WEG's property. Forbidden reproduction without previous authorization

WITNESS: **WITNESS PANEL**
REQUEST FROM: **CONNECTICUT SITING COUNCIL**

QUESTION:

Referring to the First Selectman's 2013-2014 Annual Report, is it still the Town's position that a new substation is necessary for reliable energy to serve the residents and businesses of Greenwich? What other capital improvements are proposed by the Town to ensure reliable electricity to the Town?

RESPONSE:

At the time of the 2013-2014 Annual Report, the Town was working with Eversource (then CL&P) in good faith regarding the utility's forecasts regarding electrical infrastructure needs in the Town of Greenwich. Eversource did not provide details or backup data at that time, and the Town relied on Eversource's position that a new substation was necessary. The Town made it clear that it would need to see backup data at some point to verify Eversource's assertions.

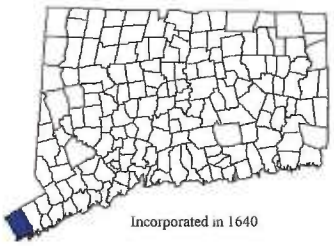
Based on the information provided to the Town from transformer manufacturers (see Response to CSC-01), and the actual updated load data for 2014 and 2015, and the fact that the Town has not experienced significant population change over the last twenty years, there is a real question as to whether cheaper and less intrusive alternatives to meet the Town's energy needs have been adequately explored by the Applicant. The Town believes that the Applicant should propose capital improvements to provide reliable electricity to the Town, while minimizing environmental impacts and reducing cost to ratepayers. See the Connecticut Economic Resource Center Data Sheet for the Town of Greenwich dated October 2014 attached hereto as Exhibit B.

Greenwich, Connecticut

CERC Town Profile 2014

Town Hall
P.O. Box 2540
Greenwich, CT 06830
(203) 622-7710

Belongs to
Fairfield County
LMA Bridgeport - Stamford
Southwestern Economic Dev. Region
South Western Planning Area



Incorporated in 1640

Demographics

Population (2012)	*Town*	*County*	*State*
2000	61,101	882,567	3,405,565
2010	60,809	905,342	3,545,837
2012	61,428	918,892	3,572,213
2020	59,375	940,616	3,690,997
'12-'20 Growth / Yr	-0.4%	0.3%	0.4%
Land Area (sq. miles)	48	626	4,845
Pop./ Sq. Mile (2012)	1,283	1,468	737
Median Age (2012)	43	40	40
Households (2012)	22,209	332,968	1,360,184
Med HH Inc. (2012)	$129,588	$82,614	$69,519

Race/Ethnicity (2012)	*Town*	*County*	*State*
White	52,746	699,870	2,802,217
Black	1,145	99,871	355,660
Asian Pacific	4,451	43,203	139,827
Native American	90	1,439	8,531
Other/Multi-Race	2,996	74,509	265,978
Hispanic (any race)	6,375	155,557	480,185
Poverty Rate (2012)	3.8%	8.8%	10.0%

Educational Attainment (2012)

Persons Age 25 or Older	*Town*	*%*	*State*	*%*
High School Graduate	6,838	16%	677,253	28%
Associates Degree	1,846	4%	177,531	7%
Bachelors or Higher	27,002	64%	879,089	36%

Age Distribution (2012)

	0-4		*5-17*		*18-24*		*25-49*		*50-64*		*65+*		*Total*
Male	2,217	4%	6,395	10%	1,468	2%	9,670	16%	6,099	10%	4,165	7%	30,014
Female	1,826	3%	5,845	10%	1,540	3%	10,025	16%	6,499	11%	5,679	9%	31,414
County Total	56,435	6%	169,978	18%	73,098	8%	314,538	34%	179,794	20%	125,049	14%	918,892
State Total	200,031	6%	612,181	17%	328,661	9%	1,194,793	33%	726,725	20%	509,822	14%	3,572,213

Economics

Business Profile (2013)

Sector	*Units*	*Employment*
Total - All Industries	4,015	34,719
23 Construction	212	913
31 Manufacturing	27	632
44 Retail Trade	361	3,801
52 Finance and Insurance	563	7,581
62 Health Care and Social Assistance	226	4,052
Total Government	20	3,304
Local/Municipal Government	16	3,171

Top Five Grand List (2013)	*Amount*	*% of Net*
Greenwich Plaza Inc	$185,990,140	0.6%
Pickwick Properties LLC	$145,204,010	0.5%
Greenwich American Inc	$122,500,000	0.4%
Property Connecticut OBJLW One Corp	$97,744,360	0.3%
GRC Realty Corp	$96,453,700	0.3%
Net Grand List (2013)	$29,583,885,305	

Major Employers (2014)

Ceci Brothers Inc	Bimbo Bakeries USA
Greenwich Hospital	Interactive Brokers Group Inc
NTC Group	

Education

2010-2011 School Year	*Town*	*State*
Total Town School Enrollment	8,712	548,313

Most public school students in Greenwich attend Greenwich School District, which has 8,842 students.

Connecticut Mastery Test Percent Above Goal

	Grade 4		*Grade 6*		*Grade 8*	
	Town	*State*	*Town*	*State*	*Town*	*State*
Reading	81	63	87	76	86	75
Math	81	67	82	72	84	67
Writing	80	67	77	65	78	65

For more education data see:
http://sdeportal.ct.gov/Cedar/WEB/ResearchandReports/SSPReports.aspx

Students per Computer	*Town*	*State*
Elementary:	3.1	4.1
Middle:	2.4	2.7
Secondary:	2.7	2.9

Average Class Size			
Grade K	17.8	Grade 2	19.6
Grade 5	21.4	Grade 7	21.2
High School	19.4		

Average SAT Score

	Town	*State*
Reading	578	502
Writing	562	506
Math	581	506

Greenwich
Connecticut

CERC start here
Connecticut Economic Resource Center, Inc.

Government

Government Form: Selectman -Representative Town Meet

Total Revenue (2012)	$360,897,505	Total Expenditures (2012)	$344,600,243
Tax Revenue	$306,616,555	Education	$152,486,555
Non-tax Revenue	$54,280,950	Other	$192,113,688
Intergovernmental	$27,425,341	Total Indebtness (2012)	$93,158,943
Per Capita Tax (2012)	$4,991	As % of Expenditures	27.0%
As % of State Average	193.3%	Per Capita	$1,517
		As % of State Average	67.2%

Annual Debt Service (2012)	$23,185,196
As % of Expenditures	6.7%
Eq. Net Grand List (2010)	$43,381,228,410
Per Capita	$706,213
As % of State Average	487%
Moody's Bond Rating (2012)	Aaa
Actual Mill Rate (2012)	10.11
Equalized Mill Rate (2012)	7.06
% of Grand List Com/Ind (2010)	13.7%

Housing/Real Estate

Housing Stock (2012)	*Town*	*County*	*State*
Total Units	24,174	360,692	1,485,445
% Single Unit	70.4%	64.4%	64.6%
New Permits Auth. (2012)	62	2,138	4,669
As % Existing Units	0.26%	0.59%	0.31%
Demolitions (2012)	66	386	955
House Sales (2011)	524	4,485	13,847
Median Price	$1,550,000	$570,000	$291,000
Built Pre 1950 share (2012)	37.9%	29.7%	30.2%

Owner Occupied Dwellings (2012)	15,801	232,128	929,560
As % Total Dwellings	65%	64%	63%
Subsidized Housing (2012)	1,314	31,049	161,379

Distribution of House Sales (2011)	*Town*	*County*	*State*
Number of Sales			
Less than $100,000	0	57	392
$100,000-$199,999	0	338	3,205
$200,000-$299,999	0	511	3,494
$300,000-$399,999	7	564	2,086
$400,000 or More	517	3,015	4,670

Labor Force

Place of Residence (2013)	*Town*	*County*	*State*
Labor Force	29,421	471,992	1,859,934
Employed	27,806	438,621	1,715,398
Unemployed	1,615	33,371	144,536
Unemployment Rate	5.5%	7.1%	7.8%
Place of Work (2013)			
Units	4,015	33,728	113,697
Total Employment	34,719	413,404	1,640,223
2000-'13 AAGR	-0.5%	-0.3%	0.2%
Mfg Employment	632	35,961	163,828

Connecticut Commuters (2011)

Commuters into Town from:		Town Residents Commuting to:	
Greenwich	6,876	Greenwich	6,876
Stamford	5,500	Stamford	2,954
Norwalk	2,174	Norwalk	785
Bridgeport	839	Westport	301
Fairfield	539	Danbury	257
Darien	518	Darien	228
Danbury	472	Bridgeport	215
Stratford	421	Fairfield	206
New Canaan	399	New Haven	194

Other Information

Crime Rate (2012)	*Town*	*State*
Per 100,000 Residents	607	2,433
Library (2013)		
Public Web Computers	116	
Circulation per Capita	27	
Families Receiving (2014)		
Temporary Assistance	119	
Population Receiving (2014)		
Food Stamps	1,403	

Distance to Major Cities	*Miles*
Hartford	69
Boston	161
New York City	31
Providence	126

Residential Utilities

Electric Provider
Connecticut Light & Power
(800) 286-2000

Gas Provider
CNG Corp
(860) 727-3000

Water Provider
Aquarion Water Company
(800) 732-9678

Cable Provider
Cablevision of Connecticut, LP
(203) 847-6666

WITNESS: **WITNESS PANEL**
REQUEST FROM: **CONNECTICUT SITING COUNCIL**

QUESTION:

Has the Town conducted any studies to document the Town's future electrical load growth? If so, please provide.

RESPONSE:

No, however the record demonstrates that the system peak load on the Cos Cob transformers has declined by 17.5% from 2013 (130.5 MVA) to 2014 (107.7 MVA), and by 12% from 2013 (130.5 MVA) to 2015 (114.8 MVA). See Eversource Response to OCC-22.

Furthermore, the Town has not experienced significant population change over the last twenty years. The population of Greenwich is in fact projected by the Connecticut Economic Resource Center to slightly decrease by 2020. See Exhibit B in response to CSC – 02.

Any studies conducted by Eversource as to the Town's future electrical load growth should take all of this information into account.

WITNESS: **WITNESS PANEL**
REQUEST FROM: **CONNECTICUT SITING COUNCIL**

QUESTION:

What would the Town project as expected electrical load growth on an annual basis to the year 2023? Please include forecast materials. How would the Town expect to meet future electrical demand?

RESPONSE:

In light of the updated actual load data now available, it appears that the existing Cos Cob transformers would not reach capacity before 2030.

Table E-1 of the application projects the 2015 "Summer Peak Load Level" as 133.1 MVA. Table E-1 projects that over the next 8 years, the Summer Peak Load Level will increase by 11.1 MVA, to a 2023 projection of 144.2 MVA.

At the time Table E-1 was prepared by Eversource, the actual data for the Summer Peak Load for 2015 was unavailable. Now, however, it is clear that the actual Summer Peak Load Level in 2015 was 114.8 MVA. Therefore, assuming the same 8-year growth of 11.1 MVA, the Summer Peak Load Level in 2023 projects to be 124.9 MVA.

Accepting this growth rate, the 135 MVA capacity for the existing Cos Cob Substation's transformers would not be reached before 2030.

WITNESS: **WITNESS PANEL**
REQUEST FROM: **CONNECTICUT SITING COUNCIL**

QUESTION:

On page 2 of the Town's letter dated November 23, 2015, Point One states the project "would in no way improve the restoration of electricity owing to a storm event...". Please explain. Does the Town have any suggestions to address this issue? How would the Town's proposed solutions affect traffic patterns, tree clearing, Town utilities and private property?

RESPONSE:

It does not appear that the Applicant has addressed the issue of "storm hardening." Options such as additional reclosers, more effective circuit sectionalizing, and the burying of existing 13.2 and 4 kv conductors are the types of "reliability" improvements that should be examined by the Applicant and would be welcomed by the Town. Even if the Applicant's $140 million proposal is approved by the Siting Council, the project will not address the fact that older overhead distribution lines remain susceptible to storm damage, and the Town will continue to be vulnerable to outages as a result of storm events.

The Town would welcome the opportunity to work with the Applicant to identify remedies to address the restoration of electricity owing to a storm event in ways that would minimize traffic disruption, environmental impact and impact to public and private property.

WITNESS: **WITNESS PANEL**
REQUEST FROM: **CONNECTICUT SITING COUNCIL**

QUESTION:
Would the Town be amenable to a GIS Substation building design that mimics the existing Pet Pantry building to the greatest extent possible? Would such a facade design retain the existing streetscape view?

RESPONSE:
No, the Town does not support a GIS substation building design that mimics the existing Pet Pantry building. As with any development in the Town, Town agencies seek to improve design elements of new structures.

Specifically, the Greenwich Planning and Zoning Commission amended the charge of the Architectural Review Committee in 1988 with evaluating the design of all proposals through the consideration of the following for the purpose of addressing building design, architectural features and landscaping:

- **Relationship of Structures and Open Spaces:** To ensure that the relationships of built up areas and open spaces have been designed so that they are harmonious to the existing structures, terrain and streetscape.

- **Protection of Neighbors:** To protect neighboring owners and property users by making sure that reasonable provision has been made for such matters as sight and sound buffers, control of trespass lighting, the preservation of views, light and air, and those aspects of design not adequately covered by other regulations which may have substantial effects on neighboring land uses.

WITNESS: WITNESS PANEL
REQUEST FROM: CONNECTICUT SITING COUNCIL

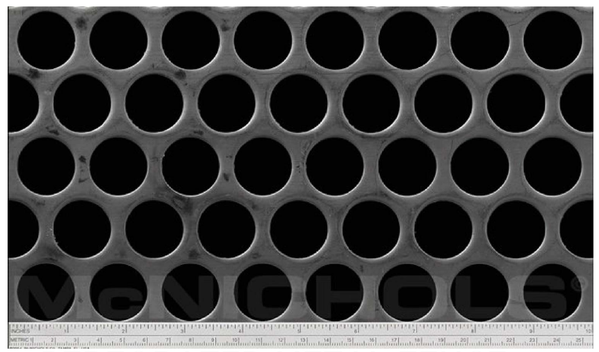
- **Streetscape and Predominant Architecture:** To ensure that new designs are consistent and harmonious in relationship to existing streetscapes and the predominant architecture of the design area.

- **Relevant Standard:** The Architectural Review Committee may also review relevant standards of Sec. 6-15 and, when applicable, Sec. 6-17 of the Town of Greenwich Building Zone Regulations in making recommendations to the Town of Greenwich Planning and Zoning Commission.

The Town does support the GIS substation design filed by Richard Granoff, AIA on August 26, 2015. The Town would also like fencing similar to that of the adjacent property (330 Railroad Avenue) to be included in this design to provide continuity in this heavily traveled and important section of Greenwich. That proposed fence design is attached as Exhibit C. The Town would like the walls of the transformers to be faced with a material to match the façade of the building. It would also like the Council to require the Applicant to incorporate significant landscaping at the site, which it understands will most likely be in planters so as to avoid the moisture issue cited by the Applicant. This could be coordinated with the Applicant during the D&M Plan stage.

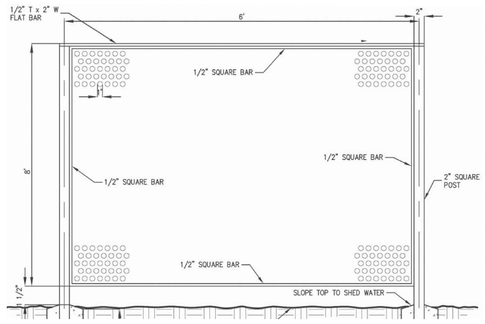
METAL PLANTER

CORTEN STEEL (APPROX. 30" HIGH)



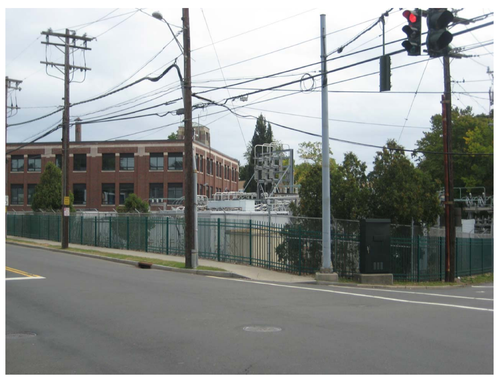
PERFORATED METAL FENCE

PERFORATION PATTERN



PERFORATED METAL FENCE

GALVANIZED STEEL 6FT LONG PANELS 8FT HIGH AROUND SUBSTATION.
6FT HIGH BEHIND REAR PARKING LOT



VIEW OF EXISTING FENCES AROUND SUBSTATION

STEEL PICKET FENCE AND CHAIN LINK WITH BARBED WIRE FENCE TO BE REPLACED BY PERFORATED METAL FENCE

GRANOFF ARCHITECTS

30 WEST PUTNAM AVENUE
GREENWICH, CT 06830

203.625.9460

WWW.GRANOFFARCHITECTS.COM

CONSULTANTS

CIVIL ENGINEER, LANDSCAPE ARCHITECT, SURVEYOR:

JOHN MEYER CONSULTING, INC
120 BEDFORD ROAD
ARMONK, NY 10504
914.273.5225

REVISIONS

#	DATE	REVISION DESCRIPTION	BY:

PHASE

ARC

PROJECT NAME

330 RAILROAD AVENUE

GREENWICH, CONNECTICUT

JOB NO.: 14074

DRAWN BY: RB | PROJ. MANAGER: RG

DATE: 10.07.15 | SCALE: NTS

DRAWING TITLE

PLANTER & FENCING

DRAWING NO.

L-0.6

WITNESS: **WITNESS PANEL**
REQUEST FROM: **CONNECTICUT SITING COUNCIL**

QUESTION:

Referring to the Town's April 6, 2015 letter to the Council, page 4, no. 12 states the Town has projects planned for many of the areas of the proposed routes. What specific Town projects are planned to occur along the proposed Preferred Route? Are such Town projects anticipated to disrupt existing traffic patterns? Is it possible to coordinate such projects with the installation of Eversource's underground cables?

RESPONSE:

Consistent with the Town's statement in its April 6, 2015 letter to the Siting Council (page 5, recommendation 2.c.) the Town has many projects occurring in the area between the Cos Cob Substation and the Railroad Avenue property. Such projects include:

- Adaptive Signal Control Project in the Railroad, Steamboat, Arch St. Signal Corridor - CMAQ - Construction Winter 2016/Spring 2017 - 1 year minimum
- Bruce Park internal bridge (not Davis) - Design 2016 - Construction 2017
- Davis Ave Bridge - Design 17/18 - Construction 19/20: This bridge is currently posted as accepting a 35 ton load, but one of the Town's inspection reports recommends downgrading it to 24 tons.
- Oneida Road Bridge - will close road, detour will be Steamboat/Museum Dr. - Construction 2018.
- Island Beach Parking Lot Improvements - Stormwater Silva Cells – Will be proposed for FY 17/18.
- Skate Park at Roger Sherman Baldwin Park - Construction 2017
- Steamboat Pier improvements – proposed for Summer 2017.
- Cos Cob Train Station - Parking Lot Repaving - Funding from CTDOT – Planned for Summer 2016

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- Bruce Park Museum has mentioned a possible significant expansion in near future depending on fundraising.
- Old Greenwich Common Force Main: Replacement of the segments along the MetroNorth Railroad (south side) from Indian Field to Bruce Park, as well as through Bruce Park to Davis Avenue planned for 2017-2018, ideally completing the project by January 2019. This project is being implemented in accordance with a federal consent decree. Eversource was made aware of the project throughout its discussions with the Town over the last several years.

It should be noted that the Davis Avenue portion of the route through the Park is part of the State's Interstate 95 diversion route in the event of a highway closure.

Disruption to traffic patterns will vary with the project. If the Siting Council concludes that the Applicant has proven the need for this project, in light of Eversource's testimony that the hybrid overhead/underground route along the MetroNorth railroad ("MNRR") corridor can be constructed, and at a significantly lower cost to ratepayers than the initial Preferred Route, the Town is hopeful that the Siting Council will focus on siting the transmission line along that route.

If the Siting Council approves the project along the MNRR corridor the Town has concerns as to the coordination of the transmission line construction with existing and future plans for the sewer main located in that proximity. Of course, the Town would expect to work collaboratively with Eversource to construct the transmission line in a manner that does not interfere with the Town's current and future plans for its sewer mains in this area.

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The Town is vehemently opposed to any transmission line route that traverses Bruce Park. The ability of the Town to coordinate with Eversource's project is impossible to forecast at this time, given that Eversource has not yet provided sufficient detail regarding just how it would be conducting its work and where.

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QUESTION:

Referring to the Town's November 23, 2015 Report, page 13, how many new Solarize CT residential installations occurred in Greenwich over the six month period referenced?

RESPONSE:

The Town participated in the Solarize CT program. The program was launched on October 2, 2013 and all contracts for the Solarize program had to be signed by February 18, 2014 (a 20 week program). During this time 40 residents signed up for the program and of those, 36 have been installed with one (1) pending. The Town is proud of this accomplishment given two challenges: 1) December 2013-February 2014 was one of the snowiest on record for the greater NY metro area including southwest CT with over 55" of snow; and 2) the solar installer assigned to Greenwich by CT Green Bank went bankrupt during the process resulting in delayed response to customers and the need to switch to a new installer.

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QUESTION:

Referring to the Town's November 23, 2015 Report, page 13, how many commercial properties participate in the C-Pace Program in Greenwich? What are the estimated annual energy savings from these installations?

RESPONSE:

The Town became a C-Pace Community in 2013 and held a kick-off reception September 13, 2013 to introduce the community to the program. The Town continues to promote the C-Pace program with flyers prominently displayed in the land use office and by working cooperatively with CT Green Bank. All signups for C-Pace are handled through the CT Green Bank.

At this time no C-Pace installations have taken place in Greenwich. The C-Pace program was established by the Connecticut legislature in 2012. Since that time, 42 projects have been contracted statewide involving 26 municipalities with most projects in large urban centers. Only 7 have been contracted in Fairfield County as follows: Westport (1), Danbury (1), Stratford (1), and Bridgeport (4).

CT Green Bank is currently working on a Fairfield County application that involves a private school in Greenwich. If this is successful, Greenwich will have its first C-Pace participant.

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QUESTION:

Please describe the Clean Energy Community Bronze level designation.

RESPONSE:

Greenwich became a Clean Energy Community ("CEC") in April 2007 and renewed that commitment in July 2013. The Town was awarded the Bronze level for CEC in 2015 and is working on attaining its Silver level standing. One key component is benchmarking all municipal buildings. The Town has been working with the Institute for Sustainable Energy ("ISE") at ECSU on this effort. Initial work began prior to the new EPA benchmarking software. ISE had agreed to transfer this information into the new benchmarking program and we are currently working with them to get this done.

To participate in the CEC program, municipal leaders pledged to reduce energy consumption by 20 percent, and support renewable energy by 20 percent by 2018. Through community-wide residential and business participation in energy-saving and renewable energy programs, the community receives points toward rewards. For every 100 points earned through participation in energy efficiency programs, a community is eligible to receive a Bright Idea Grant, ranging from $5,000 to $15,000, to be used on a community-selected energy efficiency project. Similarly, for every 100 points earned through participation in renewable initiatives, a community can receive a reward of $4,500, to be used on any project involving energy efficiency, renewable energy or alternative fuel vehicles.

The CEC has defined the Bronze, Silver and Gold level designations as follows:

- Bronze - These municipalities have pledged to the Clean Energy Community Program. There were 89 bronze award recipients in 2015.

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- Silver - These municipalities completed the requirements of bronze level and established an energy task force, engaged in community awareness of energy programs, earned a Bright Idea Grant and completed one full year of benchmarking municipal energy usage. 10 percent of the households and businesses have participated in energy saving programs and have completed 17 percent of their renewable energy commitment. There were 53 silver award recipients in 2015.

- Gold – These municipalities fulfilled all the requirements for Bronze and Silver and completed 100 percent benchmarking of Municipal and Board of Education buildings in EPA portfolio manager, redeemed their first Bright Idea Grant for an energy saving project, completed an outreach campaign for the residential and/or business community, have achieved 20 percent residential program participation and achieved 15 percent commercial/ Small Business Energy Advantage (SBEA) participation. There were 5 gold award recipients in 2015.

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QUESTION:

Referring to the Town's November 23, 2015 Report, page 18, please provide the following:

a) Please list the environmentally sensitive areas that would be directly impacted by the proposed underground and pipe trench routes.

b) What environmental function do these areas serve (e.g. habitat, watershed protection)?

RESPONSE:

Bruce Park is Greenwich's oldest public park, established in 1908 through a bequest of Robert Moffat Bruce. Located on 60 acres along the south side of Interstate 95, the park stretches for about ¾ mile between Steamboat Road to the west and Indian Field Road to the east. Indian Harbor Drive and its extension, Davis Avenue, form its southern boundary. Historic mill ponds, now functioning as tidal ponds, bisect the 60 acres, providing a prominent water feature that serves as the centerpiece of the Bruce Park landscape. It should be noted the park was originally 100 acres and that 40 acres were lost with the construction of I-95.

The park serves the community as a multiple use park with a combination of passive and active recreational areas. Over 50% of the park has a tree canopy and over 1/3 of the park is in mature forest. This urban forest landscape also includes ornamental trees, lawns and gardens, a bowling green, tennis courts, picnic area, and a softball field. The smaller western section of the park also houses the Bruce Museum in the original estate building and a playscape. The large amount of tree coverage, together with the shrubby habitat and water features, provides excellent habitat for migrating birds and other fauna that visit the park. Please see a GIS mapping and photos of Bruce Park attached hereto as Exhibit D.

Urban forests also provide for storm water management, dust and noise pollution control (especially along I-95), and air quality. Until recently, the value of urban forests has been

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overlooked but this is changing. Urban forests not only provide habitat but have social and economic values. Urban parks, such as Bruce Park, are important to the health and well being of a community. Benefits of urban forests include: opportunities for experiential education, recreational opportunities, creating a sense of history and place, proving for aesthetics, providing restorative experiences, stress reduction, improved medical recovery and convalescence, reduced domestic conflicts, and less school aggression. Please see a relevant article from the Center of Urban Horticulture attached as Exhibit E.

Bruce Park is a coastal park with several key features including the tidal ponds that lead to Indian Harbor and out to Long Island Sound (Sound). The tidal ponds and adjoining Indian Harbor are part of an estuarine environment, where fresh water meets salt water. In ecological terms, this area is called an "edge" where two different habitat types meet. As such, estuaries are regarded as some of the most important habits in the world. This constantly changing environment provides feeding, breeding, nesting and nursery areas for many animals. Over 170 fish species and 1,200 invertebrate species live year round or seasonally in the Sound. The Town has not conducted a species inventory specifically for this area but would expect many of the same species to thrive here in this estuary. Long Island Sound is the 2nd largest estuary in the United States and has been designated by US EPA as an estuary of national significance. Indeed, in additional to its ecological significance, the Sound's economic value to the local economy is estimated at $8.91 billion (2011 dollars).

Several species of interest in the park include river herring, a species of special concern as designated by the National Oceanic and Atmospheric Administration ("NOAA"), that migrate from salt water to fresh water to spawn. A NOAA river herring "Species of Concern" distribution is attached as Exhibit F. Blue crabs, which may be increasing in numbers in Long Island Sound due to climate change, migrate to less saline waters in the summer to breed. The tidal ponds and Indian Harbor are also used by numerous bird species. Its location adjacent to Long Island Sound and part of the Atlantic fly way makes it an important stop for migrating

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shore birds and migrating neo-tropical song birds. It is an important wintering area for waterfowl and a summer foraging area for great egrets (threatened status in CT), snowy egrets (threated status in CT), and osprey. Indeed 120 species have been recorded in Bruce Park as part of Cornell University's eBird program. A listing of these birds can be found in Exhibit G.

Shellfish are found in all of the Greenwich harbor areas including Indian Harbor. The harbor itself, like almost all inner harbors in CT, has been mapped as prohibited from harvesting of shellfish for human consumption. However, the shellfish are still an important part of this ecosystem removing nutrients and other pollutants from the water column and providing food for other species. This small harbor leads also directly into productive commercial shellfish beds. Greenwich waters support one of the most productive shellfisheries in Long Island Sound. Indeed, under the direction of the Shellfish Commission, hard shell clams are being harvested from Greenwich waters to be used in restoration projects such as the Nature Conservancy project in the Great South Bay off of Long Island. A State of Connecticut Shellfish Classification and Bed Delineation is attached hereto as Exhibit H.

Bruce Park is recognized by the State of Connecticut as a salt marsh migration area. These areas are low, undeveloped areas adjacent to Long Island Sound that will eventually be flooded daily as sea level rises creating new salt marsh areas. Because much of Connecticut's shoreline is already developed, areas recognized as having the potential for salt marsh restoration are very limited, significantly increasing the ecological value of this area.

The soils and geology of the park have created an interesting landscape with much of the park fairly flat with less than 5% slope. Interspersed, however, there are steep slopes formed by bedrock outcroppings that lead to dramatic vistas such as at the edge of the tidal pond. Natural soils within the park are mostly glacial till associated with bedrock but also include some hydric soils. As often seen in urban landscapes, much of the soil is classified as Udorthent. This soil type is considered made or altered soil. Looking at the park landscape today, it is not always

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obvious what existed previously. The tidal ponds and estuary (Indian Harbor), in close proximity to bedrock outcroppings, is typical of the drowned landscape features associated with the retreat of the glaciers and the subsequent extensive sedimentation of river valleys followed by abrupt sea level rise and the drowning of the Connecticut shoreline. Soils associated with tidal wetlands west of the Connecticut River, where sea level rise took place faster, are often over 16 ft in depth with some measuring over 30 ft. As such, it cannot be assumed that the soils where the drilling would take place are uniform. Indeed, it is likely that the soils will include a combination of bedrock and deep sediments. The Town is very concerned about potential impact of the drilling and long term installation of HPFF because of the connectivity between the soils, tidal ponds and Long Island Sound.

The flat landscape of the park is subject to both riverine and coastal flooding. As a mostly undeveloped landscape, it serves as a floodplain mitigation area for the Town, spreading out flood waters, trapping sediments, slowing down velocities, and buffering infrastructure from storm events including I-95 and the railroad. With sea level rising, the area is expected to develop into salt marsh and will continue to provide attenuate wave velocities associated with extreme storm events.

As stated earlier, Bruce Park was established in 1908 but its history is much earlier and includes the establishment during colonial times of a tide mill for grinding grain on Chimney Creek as it empties into Indian Harbor. Europeans often followed land use patterns established earlier by Native Americans and with the understanding that food sources such as river herring, blue crabs, and shellfish still populate the area, it is feasible that Native Americans also frequented the area. There is substantial documentation of pre-contact indigenous peoples in the surrounding area shown on the Town's historic place name map as Indian Field. The Town is in the process of conducting both historical and archaeological inventories and has recently completed a historical survey of Old Greenwich. It is presently conducting an archaeological survey at Greenwich Point. With limited resources for such work, the Town does not have an accurate survey of the

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cultural resources present on this site. Any proposed work should be required to conduct both a historic and archaeological survey of the site to ensure that no significant cultural resources will be impacted.

Given the ecological significance of the area, including its proximity to the Long Island Sound estuary and the use of the park for migrating species, including species of special concern and threatened in CT, and the known cultural resources on or within close proximity to the site, the Town urges the Siting Council to explore all other alternatives to this proposal, in order to preserve the precious natural and cultural resources of Bruce Park. This should include re-examination of the need for this project and/or the relocation of the transmission route outside of the park.

N

1 in = 200 ft

200 0 Feet

Eastern Section of Bruce Park
Proposed for Transmission Route

N

1 in = 400 ft

200 0 Feet

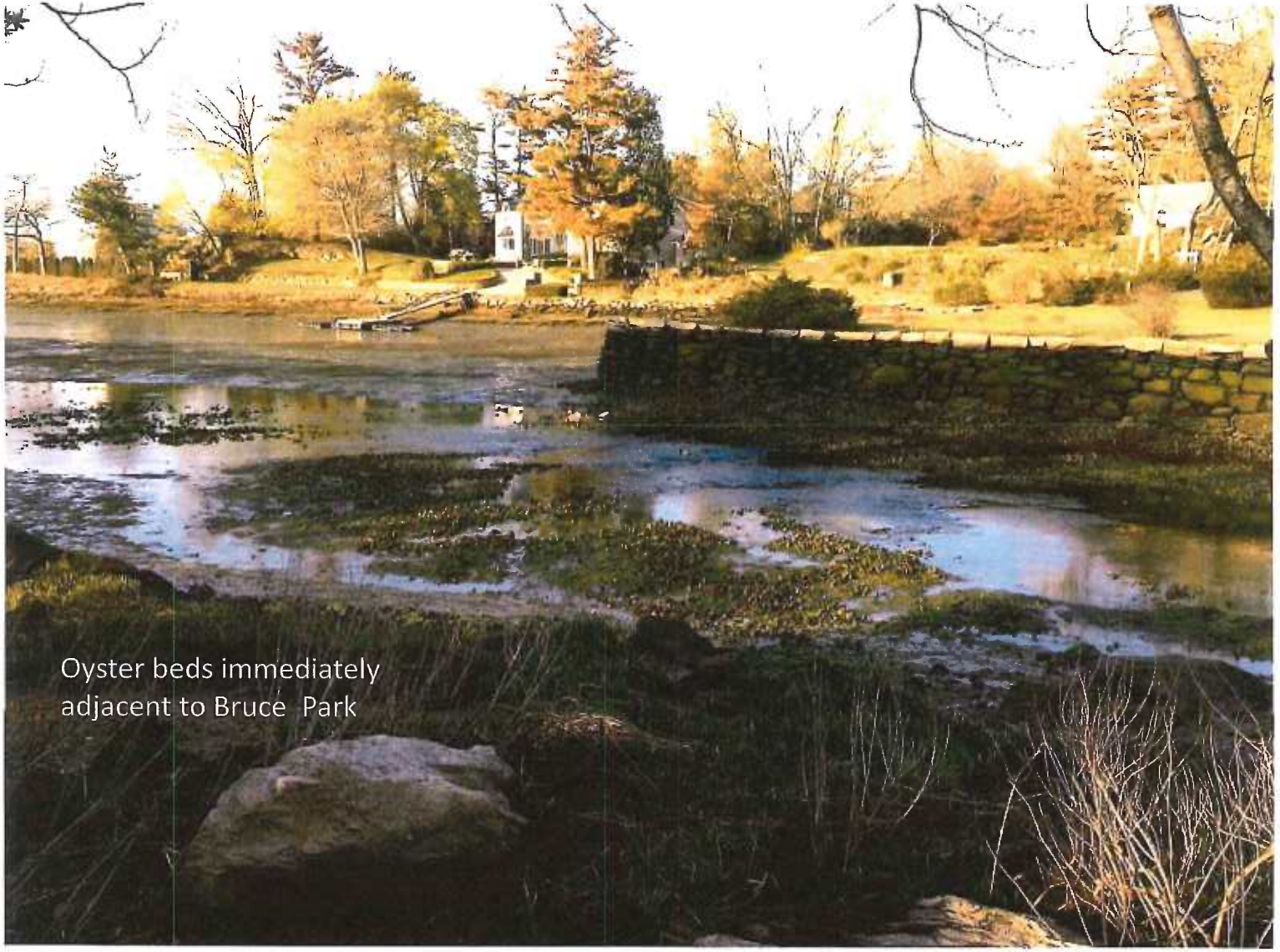
Bruce Park
Greenwich, CT

Bruce Park
Greenwich, CT

Photos

Forested area proposed for transmission lines as seen from ball field – Bruce Park 2016

Tidal Pond adjacent to Ball Field – Bruce Park 2016


Oyster beds immediately
adjacent to Bruce Park

Female hooded mergansers on tidal pond – Bruce Park 2016

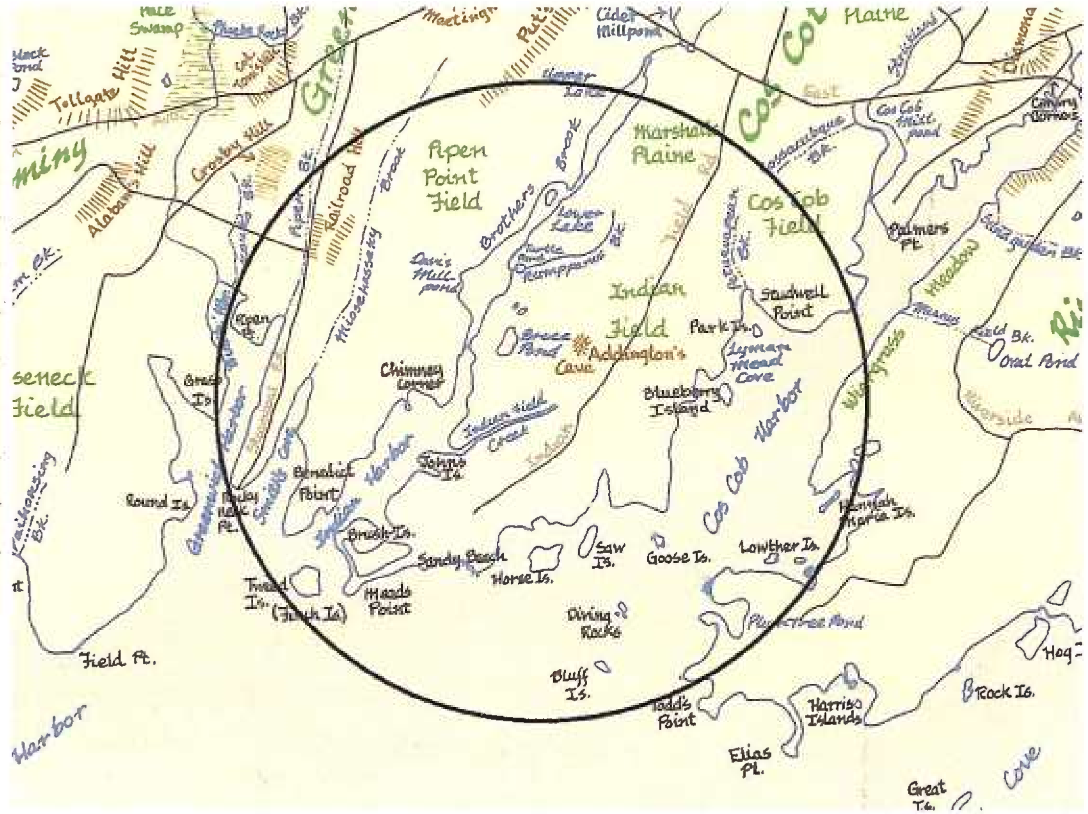
Pair of hooded mergansers –
Bruce Park 2016

Mallard ducks wintering in Bruce Park 2016

Goose management program to control nutrients into pond includes educating public on not feeding the geese.

EXHIBIT D


Historical Place Name Map
Greenwich, Connecticut


Tollgate Hill
Alabama's Hill
Crosby Hill
Railroad Hill
Apen Point Field
Brothers Brook
Lower Lake
Upper Lake
Cider Millpond
Marshall Plaine
Cos Cob Field
Indian Field
Davis Mill pond
Bruce Pond
Addington's Cave
Chimney Corner
Indian Field Creek
Park Is.
Studwell Point
Lyman Mead Cove
Blueberry Island
Cos Cob Harbor
Johns Is.
Benedict Point
Round Is.
Brush Is.
Sandy Beach
Horse Is.
Saw Is.
Goose Is.
Lowther Is.
Tweed Is.
Hazards Point
Diving Rocks
Bluff Is.
Todd's Point
Harriss Islands
Elias Pt.
Rock Is.
Field Pt.
Harbor
Palmers Pt.
Oval Pond
Riverside
Great Is.
Cove

CENTER for URBAN HORTICULTURE
University of Washington, College of Forest Resources

Urban Nature Benefits: Psycho-Social Dimensions of People and Plants

America is a nation of cities and towns – more than 80 percent of the U.S. population lives in urban areas. Plants, forests and ecosystems are important in cities. People are working in many cities to preserve existing natural areas and restore or create new ones. Scientific research tells us that urban plants provide many benefits. We know that plants improve the environment by contributing to better air and water quality and helping to reduce energy use.

Social scientists study another level of services that plants provide for urban residents. Parks, green spaces and trees are more than the "lungs of the city" or "pollution scrubbers." They affect our everyday moods, activities and emotional health. They improve our quality of life in ways that are sometimes understood, often underestimated. Whether we are active in urban nature (planting trees, growing gardens) or passively encounter city green (such as a stroll through a park), we experience personal benefits that affect how we feel and function. Proof of psychological and social benefits gives us more reasons to grow more green in cities! Below are examples from many studies.

Individual Benefits

Urban life can be demanding – juggling schedules, work, meeting daily needs and commuting. Our urban open spaces and parks can provide welcome relief, in surprising ways. Everyday nature in cities can help us to calm and cope, to recharge our ability to carry on.

RESTORATIVE EXPERIENCES – Many of the tasks of work and study demand directed attention for long periods of time. As we psychologically filter out extraneous information and distractions our minds can become cognitively fatigued. "Directed attention fatigue" can result in feelings of anxiety or stress, irritability with others and an inability to concentrate. Research has shown that brief encounters with nature can aid cognitive fatigue recovery, improving one's capacity to concentrate. Psychologists Rachel and Stephen Kaplan define the characteristics of natural places that are restorative - being away, extent, fascination and compatibility.

WORKER ATTITUDES AND WELL-BEING – Dr. Rachel Kaplan surveyed deskworkers about their rate of illness and level of job satisfaction. Some study participants could view nature from their desks, others could not. Those without, when asked about 11 different ailments, claimed 23% more times of illness in the prior six months. Desk workers with a view claimed the

following satisfactions more often than their non-view colleagues: 1) found their job more challenging, 2) were less frustrated about tasks and generally more patient, 3) felt greater enthusiasm for the job, 4) reported feelings of higher life satisfaction, and 5) reported better overall health.

STRESS REDUCTION – Stress is often talked about but little understood. We do know that constant stress can impact our immune system as well as diminish the ability to cope with challenging situations. Roger Ulrich has done studies that measure the physiological responses of our bodies (such as blood pressure and heart rate) brought on by stress. He has found that people who view nature after stressful situations show reduced physiological stress response, as well as better interest and attention and decreased feelings of fear and anger or aggression. An interesting effect found in recent studies on driving and road stress is called the "immunization effect" — the degree of negative response to a stressful experience is less if a view of nature preceded the stressful situation.

Families, Children and Youth

Our families and young people are the foundation and future of our society. Many factors, including adequate education and health care, are essential for their strength and success. In addition, children and families need supportive environments that encourage positive behaviors and provide a respite from the challenges of urban living. Recent research reveals the subtle advantages of urban green spaces.

REDUCED DOMESTIC CONFLICT – Surveys of households in Chicago's public housing have explored the role of trees on household interpersonal dynamics. The housing projects' apartment buildings are nearly identical, differing only in the amount of trees and grass growing around them. Drs. Bill Sullivan and Francis Kuo report that residents living in buildings with trees use more constructive, less violent methods to deal with conflict. Residents with green views report using reasoning more often in conflicts with their children and significantly less use of severe violence. They also report less use of physical violence in conflicts with partners compared to those living in buildings without trees.

LESS SCHOOL AGGRESSION AND VIOLENCE – School violence programs help students to control aggressive behavior with training in conflict resolution and peer intervention. Physical environments around a school also appear to play a role. Education scientists at the University of Michigan have found that scenes of neighborhoods with blighted streetscapes are perceived as dangerous and threatening. Those that are more cared for, including tended landscapes, contribute to reduced feelings of fear and violence.

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Species of Concern
NOAA National Marine Fisheries Service

River herring
(Alewife & Blueback herring)
Alosa pseudoharengus and *A. aestivalis*

Alewife. Photo credit: Jim Nagus, TN Wildlife Resources.

Blueback herring. Photo credit: Jim Nagus, TN Wildlife Resources.

KEY INFORMATION

Areas of Concern
Anadromous stocks distributed from Maine through Florida.

Year Identified as "Species of Concern"
2006

Factors for Decline
- Dams and other impediments
- Habitat degradation
- Fishing
- Bycatch
- Striped bass predation

Conservation Designations
IUCN: Not Evaluated

Brief Species Description:
Alewife and blueback herring are collectively referred to as "river herring." Due to difficulties in distinguishing between the two species, they are often harvested and managed together. They are thus both considered Species of Concern. Descriptions of each species follow.

Alewife

Alewife are currently distributed from Newfoundland through North Carolina. Historically, they were found as far south as South Carolina (Figure 1), but they have not been documented that far south in recent years (ASMFC 2005). They may live up to 10 years and reach lengths of between 14 and 15 inches (36–38 cm) (Hildebrand and Schroeder 1928 and Kocik 1998a cited in Collette and Klein-MacPhee 2002).

Alewife are anadromous and ascend coastal rivers in the spring to spawn. Spawning migrations begin in the southern portion of the range and move progressively northward and are initiated when water temperatures reach approximately 41to 50°F (5-10°C) (Loesch 1987 cited in Collette and Klein-MacPhee 2002). Alewife spawn over a wide range of substrates such as gravel, sand, detritus, and submerged aquatic vegetation, which are found in large rivers, small streams, ponds, and large lakes. Spawning generally takes place when water temperatures are between 61 and 66°F (16-19°C) (Kocik 2000). Most adults reach sexual maturity by age four, and females are capable of producing between 60,000 and 300,000 eggs annually throughout their range (Kocik 2000).

This is a relatively deep bodied and laterally compressed fish that is grayish green above, darkest on the dorsal surface, and silvery on the ventral surface and sides (Collette and Klein-MacPhee 2002). There is often a dusky spot on adult fish that is located at eye level on either side behind the margin of the gill cover (Collette and Klein-MacPhee 2002).

Alewife are distinguished from Atlantic herring by differences in body depth, origin of the dorsal fin, coloration patterns, and serrations on the midline of the ventral surface (Collette and Klein-MacPhee 2002). They also appear similar to young American shad, although there are differences in jaw length and projection, body shape, and numbers of gill rakers (Collette and Klein-MacPhee 2002).

Species of Concern
NOAA National Marine Fisheries Service

Alewife feed predominantly on zooplankton (Collette and Klein-MacPhee 2002). While at sea, they also prey on small fishes, such as Atlantic herring, eel, sand lance, cunner and other alewife as well as eating the eggs and larvae of other fish species (Collette and Klein-MacPhee 2002). While at sea, alewife are a highly migratory, pelagic, schooling species, and they undertake seasonal migrations, most likely in response to changing water temperatures (Collette and Klein-MacPhee 2002). According to Collette and Klein-MacPhee (2002), they are also light sensitive and are usually found in deeper water during the day. Diel migrations by adults may also be associated with the distribution of zooplankton in the water column (Collette and Klein-MacPhee 2002).

Blueback herring

Blueback herring have a more southerly distribution than alewife (Figure 2) and are distributed from Cape Breton, Nova Scotia to the St. John's River in Florida (Virginia Institute of Marine Sciences 2003; Collette and Klein-MacPhee 2002). They reach a maximum size of approximately 16 inches (40 cm) and are believed to live up to 8 years (Virginia Institute of Marine Sciences 2003).

Blueback herring form schools and are believed to migrate offshore to overwinter near the bottom. Like alewife, they are also anadromous, and in the late spring, adults return to shore, arriving in coastal waters approximately a month later than *A. pseudoharengus* (Virginia Institute of Marine

Alewife SOC Range

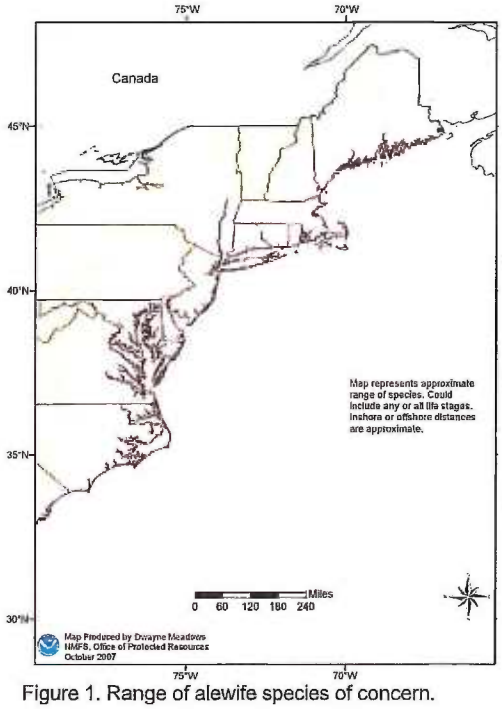

Figure 1. Range of alewife species of concern.

Blueback Herring SOC Range

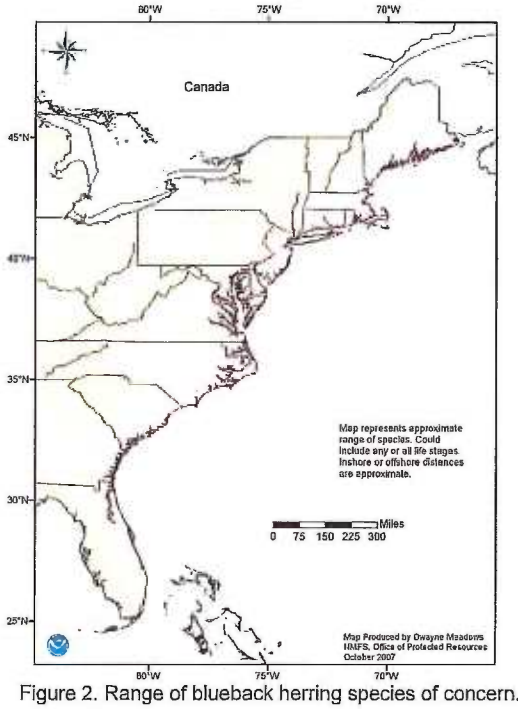

Figure 2. Range of blueback herring species of concern.

Sciences 2003). Blueback herring spawn from late March through mid-May, depending on latitude. They use a greater variety of habitats in areas where they co-occur with *A. pseudoharengus*, and spawning sites include areas with submerged aquatic vegetation, rice fields, swampy areas, and small tributaries upstream from the tidal zone (Virginia Institute of Marine Sciences 2003). Females usually mature by age five and produce between 60,000 and 103,000 eggs. Males generally mature earlier at between 3 and 4 years of age and at a smaller size than the females. According to Collette and Klein-MacPhee (2002), eggs are pelagic or semi-demersal. Young-of-the-year are found in fresh and brackish rivers, and juveniles remain in these nursery areas until they reach about 2 inches (5 cm). For both species, adults migrate quickly downstream after spawning and little is known about their life history while in the marine environment; however, they are believed to be capable of migrating long distances (over 1200 miles or 1930 km) (Virginia Institute of Marine Sciences 2003).

Blueback herring are similar in appearance to alewife. However, they can be distinguished by differences in eye diameter, body depth, and the color of the peritoneum – the abdominal cavity membrane (Collette and Klein-MacPhee 2002). Like alewife, blueback herring are planktivores, preying primarily on ctenophores, calanoid copepods, amphipods, mysids, and other pelagic shrimp and small fish while at sea (Collette and Klein-MacPhee 2002). They too are a pelagic, schooling species and undertake seasonal migrations in the sea response to changing water temperatures and diel vertical migrations in response to prey movement and availability (Collette and Klein-MacPhee 2002).

Rationale for "Species of Concern" Listing:

Demographic and Genetic Diversity Concerns:

River herring populations have exhibited drastic declines throughout much of their range (Figure 3). In Connecticut, river herring populations have been declining since approximately 1990 (Marteka 2004). Dramatic declines have been documented at the fishway at the Holyoke Dam on the Connecticut River, with numbers of river herring dwindling from approximately 600,000 in 1985 to only 1300 in 2003 (Marteka 2004). This declining trend has also been observed in Rhode Island, Massachusetts, and North Carolina. According to representatives of the Rhode Island Department of Environmental Management, runs in the state are rapidly declining, and 2005 had some of the lowest counts ever recorded in the state (Save the Bay – www.savebay.org). According to Save the Bay, the Gilbert Stuart run, which has historically been the state's largest, declined from 290,000 fish in 2000 to 17,000 in 2004, which represents a 95% decline in abundance. According to the North Carolina Wildlife Resources Commission, the herring populations in the lower Cape Fear River are particularly low. In a year-long study conducted by the University of North Carolina at Wilmington's Center for Marine Sciences, researchers sampled nine tributary creeks in

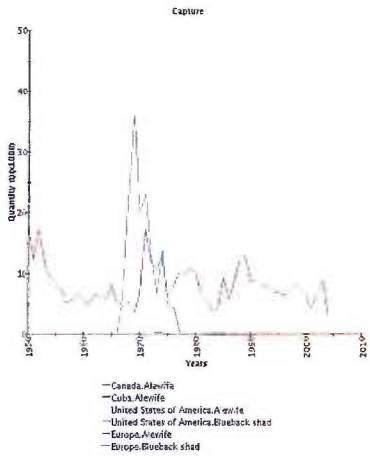

Figure 3. Global Alewife Landings (source: http://www.fao.org/figis/servlet/static?dom=root&xml=tseries/index.xml)

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the lower river and only collected 18 river herring. In the St. Croix River, alewife runs declined from a high of 2,624,700 fish in 1987 to a low of 1299 fish in 2004 (Figure 4, St. Croix International Waterway Commission and Fisheries and Oceans Canada 2005). In 2005, spawning escapement increased slightly to 11,632 fish, which is the highest count since 1999. On the ASMFC's river herring message board, there are anecdotal reports of declines of river herring in Connecticut, North Carolina, and the Delaware River (www.asfmc.org).

> "We have had a total closure on the taking of blueback herring and alewife in Connecticut for the last couple of years (CT Department of Environmental Protection order). The recorded numbers of these forage fish entering the rivers seem to be crashing here..."
>
> "We in North Carolina have seen them decrease by 90% over the last decade or so, probably due to overfishing, based on NC Division of
>
> Marine Fisheries statistics...."
>
> "There has been an enormous decline in the Delaware River in the past ten years. I normally fish above the tidal flow. Last year, I caught no herring and about 5 American shad. The past three years have been very poor. In the past seven years, I had two seasons of fair fishing (60 shad per season)."

The Ocean Biogeographic Information System (OBIS) website provides fishery independent data for river herring from a variety of sources. These data also indicate a significant declining trend in river herring populations throughout their range (Figure 5).

A tagging study conducted on the Saint John River in New Brunswick, Canada indicated that river herring return with accuracy not only to their home rivers but also to natal areas within those rivers (Jessop 1994). According to Jessop (1994), results of this tagging study indicate that river herring are best managed on a population-specific basis rather than on a mixed stock basis. Due to concern over interactions of smallmouth bass and anadromous alewife in the St. Croix River, Maine Rivers has initiated a study entitled "A study toward the co-management of alewife and smallmouth bass in the St. Croix River, Maine/New Brunswick." One aspect of this study is to assess the genetic diversity and relationships of St. Croix alewife populations and to develop methods to differentiate between anadromous and landlocked alewife

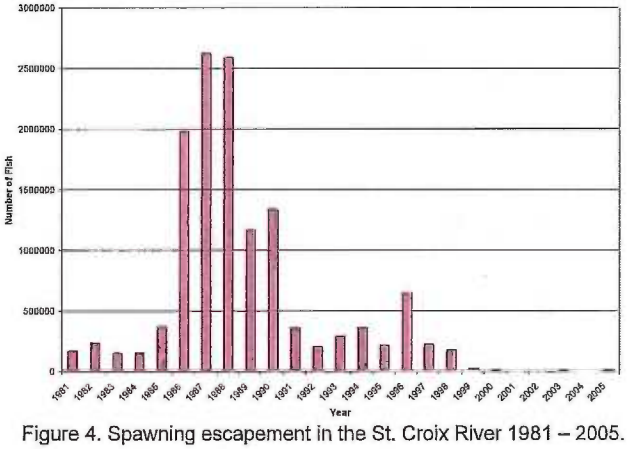

Figure 4. Spawning escapement in the St. Croix River 1981 – 2005.

populations. Bentzen and Paterson (2005) found that anadromous and landlocked populations from the St. Croix are genetically divergent and that there is significant genetic differentiation between anadromous alewife from the St. Croix and anadromous populations in the LaHave and Gaspereau Rivers (Bentzen and Paterson 2005). They also found some genetic differences between two different tributaries to the St. Croix – Dennis Stream and Milltown. These results indicate that alewife do home to their natal streams, and that there is at least partial reproductive isolation between spawning runs, even at the level of tributaries within the St. Croix River (Bentzen and Paterson 2005). The degree of genetic differentiation between the two tributaries to the St. Croix, while significant, was relatively small, and thus, further research needs to be conducted before any definitive conclusions can be drawn regarding whether distinct population segments of alewife exist.

Factors for Decline:

There are several threats to both species that have most likely contributed to their decline. These threats include: loss of habitat due to decreased access to spawning areas from the construction of dams and other impediments to migration; habitat degradation; fishing; and increased predation due to recovering striped bass populations.

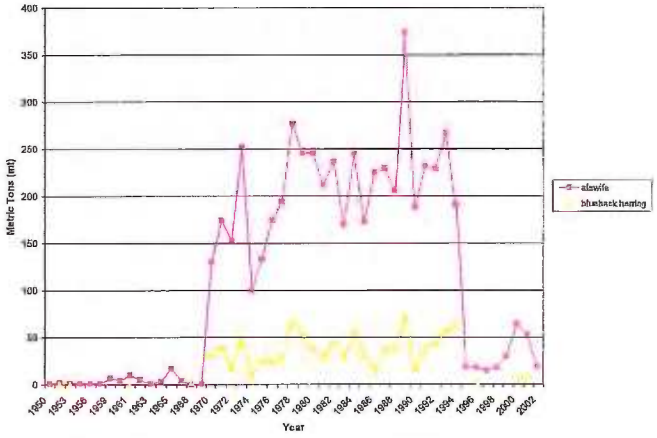

Figure 5. River herring abundance. OBIS.

The river herring fishery is one of the oldest documented fisheries in North America, dating back over 350 years in some areas. Until the late 1960s, it was exclusively a U.S. inshore fishery. However, in the late 1960s, distant-water fleets began fishing for river herring off the Mid-Atlantic coast (Kocik 2000). According to the Food and Agriculture Organization of the United Nations' other countries such as Cuba, Bulgaria, Germany, the Netherlands, Poland, Spain, and the former Union of Soviet Socialist Republics reported landings of river herring from 1966 through about 1977 and again from 1984 through 1989.

Commercial alewife landings in the U.S. peaked in the late 1950s and mid 1970s at over 34,500 mt before declining to minimal levels in the late 1970s (Figure 6) with implementation of the Fisheries Conservation and Management Act (Kocik 2000). Blueback herring landings are only available from 2000-2004, and ranged from a high of 37.2 mt in 2000 to a low of 1.5 mt in 2001. Intensification of the river herring fishery was associated with declining abundance in U.S. river systems (Kocik 2000). According to Kocik (2000), the principal fishing gears used in the river herring fisheries are fish weirs, pound nets, and gill nets. River herring are taken as bycatch in other ocean fisheries in various gear types including gillnets, bottom otter trawls, and menhaden purse seines (ASMFC 1999). Along the East Coast, there are extensive recreational fisheries for river herring in many rivers (ASMFC 1999). According to the Atlantic States Marine Fisheries Commission (ASMFC 1999), some are hook and

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line fisheries (i.e., Delaware River) while in several states various types of dip nets and seines are permitted. According to NMFS's Marine Recreational Fisheries Statistics Survey, recreational harvest of river herring in 2004 was 378,540 fish, which is a slight increase from 2003 (360,350 fish) (ASMFC 2005). While specific data on the nature of the recreational fishery for river herring are limited, catch and release recreational fisheries have been reported to take place in many states (ASMFC 2005). The total quantity of fish landed by these recreational netters for personal use (i.e., bait and consumption) may be quite large. All of these landings are unreported and thus, represent a large potential bias in recorded recreational river herring harvests.

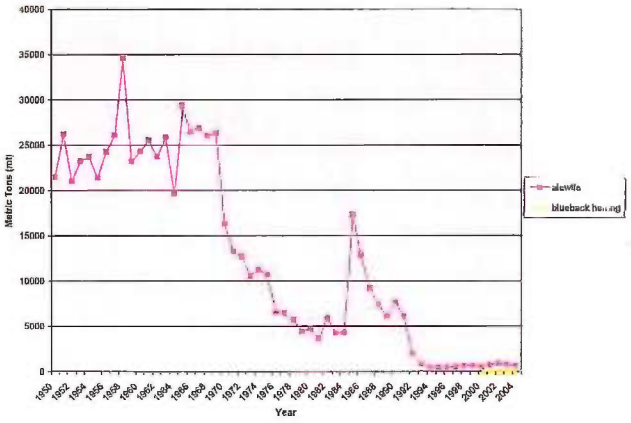

Figure 6. Commercial river herring landings 1950-2004 (source: http://www.st.nmfs.gov/st1/commercial/landings/annual_landings.html)

The dramatic decline in landings since the mid-1960s reflects substantial decreases in resource abundance since that time, and several populations are still being exploited at higher than optimum levels. In addition, a great deal of historic spawning habitat remains unavailable. In response to the decline in landings and apparent resource conditions, the ASMFC has prepared a comprehensive coastwide management plan for shad and river herring to facilitate cooperative management and restoration efforts between the states. At present, there is limited information available on which to base regulations, but additional data collected under provisions of the Plan should provide a better basis for understanding resource status and for regulatory actions.

Status Reviews/Research Underway:

Data Deficiencies:
Accurate population estimates for most river systems in which river herring are present are not available. River herring populations are declining throughout their range and yet, no single factor can be identified as being responsible for this decline. As such, it is necessary to determine the extent to which habitat loss/destruction, alterations in flow and other important habitat characteristics, increased predation by recovering species such as striped bass, bycatch in ocean fisheries such as the Atlantic herring fishery, and climactic changes are affecting these species. Additional genetic analyses are also needed in order to determine if distinct populations exist.

Existing Protections and Conservation Actions:
In response to the declining trend for river herring, the states of Massachusetts, Rhode Island, Connecticut, and North Carolina have instituted moratoriums on taking and possessing river herring. The North Carolina Division of Marine Fisheries developed a River Herring Fisheries Management Plan that details the steps that are necessary to recover North Carolina's river herring populations.

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Videos:
History of Alewife fish ladder in Damariscotta, ME (9:43)
http://www.youtube.com/watch?v=zGRc4YZBYkA
Cast netting for alewives (0:51) http://www.youtube.com/watch?v=bvrYwndRnQM
Alewife migration 3:26 http://www.youtube.com/watch?v=yFZaSLOeDcM
Blueback herring catching with a scap net (9:23) http://www.youtube.com/watch?v=V6-x6JkgqWg

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Fish bypass ladder installed on Parker River Dam, Byfield, MA, 2000. NOAA Restoration Center Community-based Restoration Project. Photo Credit: NOAA photo library.

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Virginia Institute of Marine Sciences. 2003. Blueback herring page. http://www.fisheries.vims.edu/femap/fish%20pages/Blueback%20Herring.htm.

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Point(s) of contact for questions or further information:
For further information on this Species of Concern, or on the Species of Concern Program in general, please contact NMFS, Office of Protected Resources, 1315 East West Highway, Silver Spring, MD 20910, (301) 713-1401, soc.list@noaa.gov; http://www.nmfs.noaa.gov/pr/species/concern/, or Kimberly Damon-Randall, NMFS, Northeast Region, One Blackburn Drive, Gloucester, MA 01930-2295, (978) 281-9328, x6535, Kimberly.Damon-Randall@noaa.gov.

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Bruce Park (Greenwich)

Fairfield County, Connecticut, US — Get Directions

All Months | All Years | Set | Submit Data

Overview Recent Visits

122 Species 131 Checklists

Updated 5 sec ago.

Last Seen First Seen High Counts Bar Charts Show All Details

SPECIES NAME	COUNT	DATE	BY
Canada Goose	X	6 Feb 2016	Anonymous eBirder
Gadwall	X	6 Feb 2016	Anonymous eBirder
American Black Duck	X	6 Feb 2016	Anonymous eBirder
Mallard	X	6 Feb 2016	Anonymous eBirder
Bufflehead	X	6 Feb 2016	Anonymous eBirder
Hooded Merganser	X	6 Feb 2016	Anonymous eBirder
Fish Crow	X	6 Feb 2016	Anonymous eBirder
Belted Kingfisher	1	29 Jan 2016	Cynthia Ehlinger
Song Sparrow	2	28 Jan 2016	maggie peretto
Eastern Towhee	1	28 Jan 2016	maggie peretto
Great Egret	1	25 Jan 2016	stefan martin
Merlin	1	25 Jan 2016	Annette Cunniffe
Dark-eyed Junco	6	25 Jan 2016	Annette Cunniffe

Recent Visits

Checklists submitted within the last hour are not shown.

OBSERVER	DATE	SPECIES
Cynthia Ehlinger	29 Jan 2016	1
maggie peretto	28 Jan 2016	2
stefan martin	25 Jan 2016	1
Annette Cunniffe	25 Jan 2016	2
Sean Murtha	22 Jan 2016	12
Joe Zeranski	20 Jan 2016	3
Tait Johansson	12 Jan 2016	15
Michael Aurelia	10 Jan 2016	9
Cynthia Ehlinger	9 Jan 2016	20
Michael Aurelia	6 Jan 2016	15

More Recent Visits...

SPECIES NAME	COUNT	DATE	BY
Mute Swan	X	22 Jan 2016	Sean Murtha
American Wigeon	X	22 Jan 2016	Sean Murtha
Ring-billed Gull	X	22 Jan 2016	Sean Murtha
Herring Gull	X	22 Jan 2016	Sean Murtha
gull sp.	20	20 Jan 2016	Joe Zeranski
Red-breasted Merganser	8	12 Jan 2016	Tait Johansson
American Coot	1	12 Jan 2016	Tait Johansson
Northern Flicker	1	12 Jan 2016	Tait Johansson
Blue Jay	X	12 Jan 2016	Tait Johansson
American Robin	X	12 Jan 2016	Tait Johansson
European Starling	X	12 Jan 2016	Tait Johansson
Great Black-backed Gull	1	10 Jan 2016	Michael Aurelia
House Finch	1	10 Jan 2016	Michael Aurelia
Eurasian Wigeon	1	9 Jan 2016	Cynthia Ehlinger
American Crow	2	9 Jan 2016	Cynthia Ehlinger
White-throated Sparrow	1	9 Jan 2016	Cynthia Ehlinger
House Sparrow	3	9 Jan 2016	Cynthia Ehlinger
Mourning Dove	5	6 Jan 2016	Michael Aurelia
Red-bellied Woodpecker	1	6 Jan 2016	Michael Aurelia
Northern Mockingbird	1	6 Jan 2016	Michael Aurelia
Cedar Waxwing	1	6 Jan 2016	Michael Aurelia

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BY SPECIES | BY CHECKLISTS

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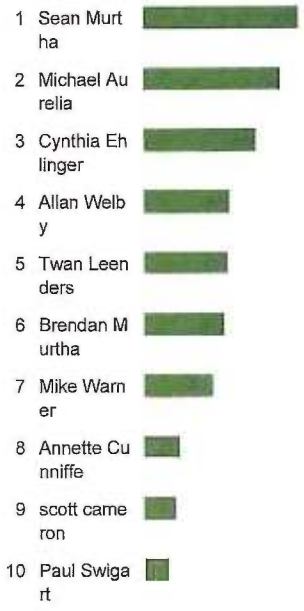


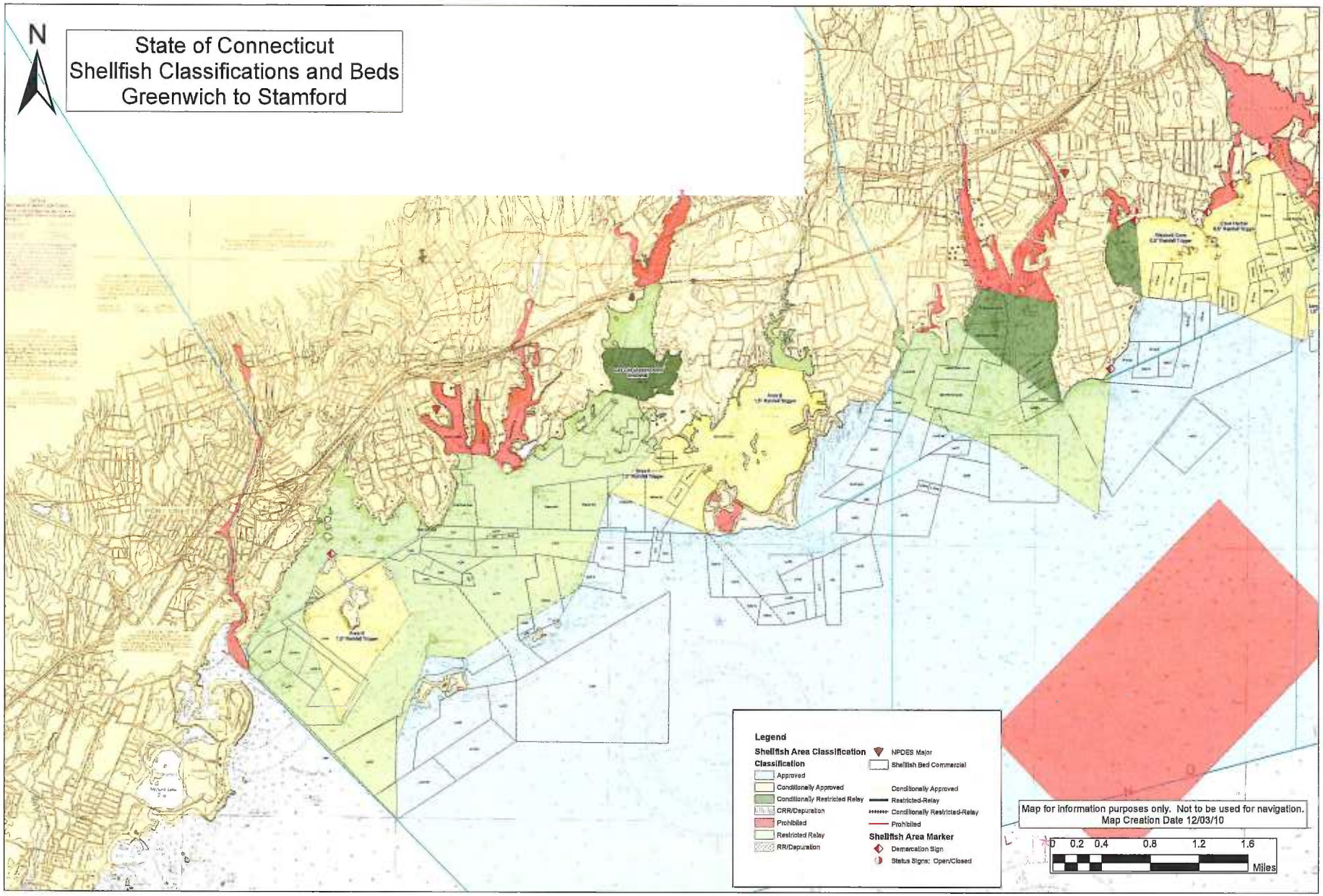
SPECIES NAME	COUNT	DATE	BY
Ring-necked Duck	1	21 Dec 2015	Michael Aurelia
Downy Woodpecker	3	28 Nov 2015	Nick Dorian
Black-capped Chickadee	4	28 Nov 2015	Nick Dorian
American Goldfinch	1	28 Nov 2015	Nick Dorian
Double-crested Cormorant	2	27 Oct 2015	Michael Aurelia
Great Blue Heron	2	27 Oct 2015	Michael Aurelia
Laughing Gull	4	27 Oct 2015	Michael Aurelia
Hairy Woodpecker	1	27 Oct 2015	Michael Aurelia
Tufted Titmouse	2	27 Oct 2015	Michael Aurelia
Yellow-rumped Warbler	5	27 Oct 2015	Michael Aurelia
Swamp Sparrow	2	27 Oct 2015	Michael Aurelia
Snowy Egret	X	23 Oct 2015	Sean Murtha
Chipping Sparrow	35	21 Oct 2015	Cynthia Ehlinger
Brown-headed Cowbird	180	21 Oct 2015	Cynthia Ehlinger
Eastern Phoebe	1	16 Oct 2015	stefan martin
Wood Thrush	1	16 Oct 2015	stefan martin
Red-winged Blackbird	1	16 Oct 2015	stefan martin
Eastern Kingbird	1	27 May 2015	John Miller
Common Grackle	2	24 May 2015	Michael Aurelia
Black-crowned Night-Heron	1	23 May 2015	Jesse Farnham
	1	13 May 2015	

SPECIES NAME	COUNT	DATE	BY
Spotted Sandpiper			Cynthia Ehlinger
Northern Cardinal	1	9 May 2015	Peter Bengtson
Wild Turkey	1	6 May 2015	Allan Welby
Red-tailed Hawk	1	6 May 2015	Allan Welby
Chimney Swift	1	6 May 2015	Allan Welby
Great Crested Flycatcher	1	6 May 2015	Allan Welby
Warbling Vireo	1	6 May 2015	Allan Welby
House Wren	1	6 May 2015	Allan Welby
Common Yellowthroat	1	6 May 2015	Allan Welby
Yellow Warbler	3	6 May 2015	Allan Welby
Pine Warbler	1	6 May 2015	Allan Welby
Indigo Bunting	1	6 May 2015	Allan Welby
Ruby-throated Hummingbird	1	5 May 2015	Allan Welby
Black-throated Blue Warbler	1	5 May 2015	Allan Welby
Osprey	X	1 May 2015	Sean Murtha
Barn Swallow	X	1 May 2015	Sean Murtha
Black-and-white Warbler	X	1 May 2015	Sean Murtha
Northern Rough-winged Swallow	2	23 Apr 2015	Cynthia Ehlinger
Tree Swallow	4	23 Apr 2015	Cynthia Ehlinger
Ruby-crowned Kinglet	1	23 Apr 2015	Cynthia Ehlinger
Brown Creeper	1	4 Apr 2015	Cynthia Ehlinger
Great Horned Owl	1	7 Mar 2015	Brendan Murtha
	1	26 Feb 2015	Sean Murtha

SPECIES NAME	COUNT	DATE	BY
Rough-legged Hawk			
Rock Pigeon	5	25 Jan 2015	Brendan Murtha
Carolina Wren	1	1 Jan 2015	Annette Cunniffe
American Tree Sparrow	1	1 Jan 2015	Annette Cunniffe
Fox Sparrow	5	1 Jan 2015	Annette Cunniffe
White-breasted Nuthatch	1	11 Oct 2014	Cynthia Ehlinger
Palm Warbler	1	11 Oct 2014	Cynthia Ehlinger
Yellow-crowned Night-Heron	3	5 Oct 2014	kaitlyn packer
Cooper's Hawk	1	5 Oct 2014	kaitlyn packer
Gray Catbird	1	22 Jul 2014	Michael Aurelia
Veery	1	28 May 2014	Allan Welby
Chestnut-sided Warbler	1	28 May 2014	Allan Welby
Baltimore Oriole	1	28 May 2014	Allan Welby
Eastern Wood-Pewee	1	13 May 2014	Allan Welby
Red-eyed Vireo	2	13 May 2014	Allan Welby
Swainson's Thrush	2	13 May 2014	Allan Welby
Ovenbird	3	13 May 2014	Allan Welby
Northern Parula	3	13 May 2014	Allan Welby
Magnolia Warbler	4	13 May 2014	Allan Welby
Blackpoll Warbler	2	13 May 2014	Allan Welby
Black-throated Green Warbler	3	13 May 2014	Allan Welby

	SPECIES NAME	COUNT	DATE	BY
97	**Scarlet Tanager**	1	13 May 2014	Allan Welby
98	**Yellow-bellied Sapsucker**	1	25 Mar 2014	Mike Warner
99	Mallard (Domestic type)	6	9 Nov 2013	Cynthia Ehlinger
100	**Common Nighthawk**	5	30 Sep 2013	Cynthia Ehlinger
101	**Wood Duck**	1	18 Aug 2013	Michael Aurelia
102	**American Redstart**	1	16 May 2013	Sean Murtha
103	**Orchard Oriole**	1	16 May 2013	Sean Murtha
104	**Brant**	12	19 Apr 2013	Mike O'Leary
105	**Golden-crowned Kinglet**	4	9 Nov 2012	Sean Murtha
106	**Hermit Thrush**	1	9 Nov 2012	Sean Murtha
107	**Blue-headed Vireo**	1	11 Oct 2012	Sean Murtha
108	**Red-breasted Nuthatch**	1	3 Oct 2012	Sean Murtha
109	**Northern Waterthrush**	1	14 May 2012	Sean Murtha
110	**Canada Warbler**	1	11 May 2012	Sean Murtha
111	**Peregrine Falcon**	1	9 May 2012	Michael Aurelia
112	**Nashville Warbler**	1	4 May 2012	Michael Aurelia
113	**Prairie Warbler**	1	4 May 2012	Michael Aurelia
114	**Blue-winged Warbler**	2	4 May 2012	Brendan Murtha
115	**Mourning Warbler**	1	4 May 2012	Brendan Murtha
116	**Wilson's Warbler**	1	4 May 2012	Brendan Murtha
117	**Blackburnian Warbler**	1	3 May 2012	Mike Warner

SPECIES NAME	COUNT	DATE	BY
Worm-eating Warbler	2	2 May 2012	Sean Murtha
Turkey Vulture	1	28 Oct 2011	Sean Murtha
duck sp.	2	21 Aug 2011	Michael Aurelia
crow sp.	1	13 Feb 2011	Michael Aurelia
sparrow sp.	10	26 Dec 2010	Michael Aurelia
Field Sparrow	3	6 Oct 2010	Michael Aurelia
Black Vulture	1	26 Mar 2010	Cynthia Ehlinger
Monk Parakeet	X	1 Mar 1997	Anonymous eBirder
Cliff Swallow	X	22 May 1948	Andrew Starrett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Shellfish Area Marker
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WITNESS: **WITNESS PANEL**
REQUEST FROM: **CONNECTICUT SITING COUNCIL**

QUESTION:

Does the Town restrict the use of salt, sand or chemical deicer on the roads through Bruce Park? Does the Town apply fertilizers, pesticides or other substances to any areas of Bruce Park? How are these substances prevented from reaching the tidal ponds in Bruce Park during runoff events? Are commercial vehicles prevented from traversing the roads in Bruce Park?

RESPONSE:

The Greenwich Department of Public Works utilizes 100% salt mixture on all Town roads including Bruce Park for deicing. It does not use any sand in this mix to reduce sedimentation to waterbodies. The road system in Bruce Park does not have curbs, allowing storm water from the roads to runoff onto the park land, where it can infiltrate into the ground before discharging to water resources. The tidal ponds in Bruce Park are already saline with tidal flushing twice per day. While the impact of road salts on the freshwater environment is reason for concern, those same concerns do not related to coastal waters.

In 2005, the Town established an Integrated Pest Management (IPM) policy in effect for all Town properties managed by the Parks and Recreation Department, including Bruce Park. The Town employs alternatives to chemical use such as mechanical and/or cultural practices where possible. The IPM Policy provides: "The purpose of this (IPM) policy is to develop management strategies that assure non-essential use of pesticides on parklands and other facility properties under the jurisdiction of the Parks and Trees Division of the Greenwich Department of Parks & Recreation. The Parks and Trees Division will take into account all available non-pesticide alternatives when considering pest control on Town properties. Pest control under the Parks and Trees Division jurisdiction (including municipal contractors) will be conducted through an Integrated Pest Management approach."

WITNESS: WITNESS PANEL
REQUEST FROM: CONNECTICUT SITING COUNCIL

In addition, the Board of Selectmen has mandated that no pesticides be applied to Town athletic fields. As such, our Athletic Field Management program has developed a certified organic program for all town fields. This includes the softball field in Bruce Park.

Upon research of our annual reports there has been no registered pesticides used in Bruce Park except for a ¼ acre bowling green which is managed similar to a golf green. Again, all pesticides are used following our IPM policy guidelines. Since the bowling green is very flat, runoff is infiltrated into the ground or travels over vegetated area before entering the tidal ponds.

Within Bruce Park, immediately to the east of where Kinsman Lane meets Bruce Park Drive, the Town recently planted a "Zen Garden," a form of rain garden. This multi thousand square foot area is less than twenty feet off the edge of the paved travel lane. It features deciduous and evergreen specimens not often seen in Fairfield County. The garden's placement and success speaks to the Town's management of harmful chemicals.

The Town has demonstrated its commitment to best practices for stormwater management through the adoption of drainage standards that require low impact development (LID) techniques be used when developing land within the Town. LID seeks to take advantage of the natural environment's ability to handle stormwater as much as possible during site development. The Zen Garden in Bruce Park is an important example of a project designed to demonstrate these principles and to encourage others to adopt them on their properties. The drainage standards and projects such as this help manage stormwater quantity and quality, both important Town goals.

The Town must also manage stormwater quantity and quality as a requirement of the federal Clean Water Act, and is subject to regulation under the State's Phase 2 Municipal Separate Storm Sewer System (MS4) program. This program requires the Town to implement a range of best

WITNESS: WITNESS PANEL
REQUEST FROM: CONNECTICUT SITING COUNCIL

management practices that regulate everything from how development is managed to how roadways and stormwater system infrastructure are maintained, all to protect water quality. While the Town does not know the full extent of the impacts to Bruce Park from Eversource's proposal, in addition to severely altering a mature urban forest, stormwater quality could be affected by the project. Mature landscapes have a higher potential to absorb rain, as compared to a clear cut area. Given the Town's commitment to managing its stormwater, as well as regulatory requirements to do so, it is concerned that the project could cause adverse effects. The nature of the roads throughout Bruce Park, narrow, curvy with numerous pedestrian crosswalks, discourages commercial traffic. A bridge on Bruce Park Drive that crosses the Indian Harbor estuary is over limited dimension and weight capacity so as to be known to be avoided by heavily laden vehicles.

WITNESS: **WITNESS PANEL**
REQUEST FROM: **CONNECTICUT SITING COUNCIL**

QUESTION:

Is Indian Harbor in Bruce Park classified as an impaired waterway? If so, please list current water pollution sources.

RESPONSE:

The 2014 State of Connecticut Integrated Water Quality Report – Final dated October 1, 2014 ("2014 Water Quality Report") designates Indian Harbor as an impaired waterway under Sections 305 (b) and 303 (d) of the Federal Clean Water Act. The Town has filed for administrative notice of the 2014 Water Quality Report, however the specific pages of the Report that are responsive to this interrogatory are attached hereto as Exhibit I.

As with most inner harbors in southwestern Connecticut, the Indian Harbor Estuary was cited as impaired designated use for Habitat for Marine Fish, Other Aquatic Life and Wildlife with the cause as dissolved oxygen saturation and nutrient/eutrophication biological indicators. Potential sources of pollution include industrial point source discharges, municipal discharges, illicit discharge, remediation sites, and groundwater contamination. The Inner Indian Harbor (CT-W1-020) was not assessed for Direct Consumption of shellfish. The outer Indian Harbor area (CT-W2-023) indicates it would not support Direct Consumption of shellfish. This is primarily associated with the moorings fields at the opening of the harbor.

It should be noted that the Town is not aware of any sampling conducted by DEEP in Indian Harbor or any harbors in Greenwich. The 2014 Water Quality Report assessment is based on DEEP's Long Island Sound monitoring being conducted as part of the US EPA Long Island Sound Study and extrapolation of data from this monitoring. See the 2014 Water Quality Report for details. Additionally, the Town of Greenwich Shellfish and Conservation Commissions have been working with the NOAA doing detailed water quality sampling in Greenwich waters. Findings are showing that near shore waters around Greenwich do not have the same dissolved

WITNESS: WITNESS PANEL
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oxygen problems as is being reflected in the DEEP sampling and indeed NOAA is reporting better water quality than is generally reported for western Long Island Sound. Possible reasons for this difference may include: 1) wave action along the shoreline that helps to mix oxygen into the water; and 2) the productive shellfish beds in Greenwich waters. Shellfish take out nutrients, a primary cause of hypoxia in LIS and recent studies are showing that a vibrant shellfishery significantly improves local waters. These findings are not unique to Greenwich waters and are beginning to be more fully explored by state and federal agencies.

Connecticut 2014 305b Assessment Results

ESTUARIES

TABLE 2-6

Waterbody Segment ID	Waterbody Name	Location	Square Miles	Aquatic Life	Recreation	Shellfish	Shellfish Class
CT-W1_016-SB	LIS WB Inner - Holly Pond, Stamford	See Map for Boundaries. Western portion of LIS, Inner Estuary, from Holly Pond outlet at Brush Island (flows into Cove Harbor), US to saltwater limit at Route 1 crossing (just DS of I95 crossing), Stamford/Darien.	0.31	Not Assessed	Not Assessed	Not Supporting	Commercial Harvesting
CT-W1_017-SB	LIS WB Inner - Stamford Harbor (mouth), Stamford	See Map for Boundaries. Western portion of LIS, Inner Estuary, from SA/SB water quality line at mouth of Harbor (Davenport Point to Shippan Point), up to Cook Road and across to Yacht Club, Stamford.	0.436	Not Assessed	Not Assessed	Fully Supporting	Commercial Harvesting
CT-W1_018-SB	LIS WB Inner - Stamford Harbor (Inner), Stamford	See Map for Boundaries. Western portion of LIS, Inner Estuary, from Cook Road and across to Yacht Club, US to saltwater limit in both the West (Route 137 crossing above I95 crossing) and East (Jefferson Street) Branches of Harbor, Stamford.	0.318	Not Supporting	Not Assessed	Not Assessed	Commercial Harvesting
CT-W1_020	LIS WB Inner - Indian Harbor (upper), Greenwich	See Map for Boundaries. Western portion of LIS, Inner Estuary, upper Indian Harbor (lower portion of Greenwich Creek) from Davis Avenue crossing, US to saltwater limit at West Brother Drive crossing (includes I95 crossing), Greenwich.	0.025	Not Supporting	Not Assessed	Not Assessed	Direct Consumption

Connecticut 2014 305b Assessment Results ESTUARIES TABLE 2-6

Waterbody Segment ID	Waterbody Name	Location	Square Miles	Aquatic Life	Recreation	Shellfish	Shellfish Class
CT-W2_021	LIS WB Shore - Greenwich Cove, Greenwich	See Map for Boundaries. Western portion of LIS from Todd Point to Greenwich Point (includes Elias Point, Greenwich Island, Pelican Island, Flat Neck Point, Greenwich Cove) out approximately 1000 ft offshore, Greenwich.	1.244	Not Assessed	Not Assessed	Not Supporting	Direct Consumption
CT-W2_022	LIS WB Shore - Cos Cob Harbor, Greenwich	See Map for Boundaries. Western portion of LIS from Tweed Island to Todd Point (includes Horse Island, Goose Island, Cos Cob Cove) out approximately 1000 ft offshore, Greenwich.	0.704	Not Assessed	Not Assessed	Not Supporting	Direct Consumption
CT-W2_023	LIS WB Shore - Smith Cove, Indian Hrbr, Greenwich	See Map for Boundaries. Western portion of LIS from Field Point to Tweed Island (includes Round Island, Tweed Island, Smith Cove, Indian Harbor) out approximately 1000 ft offshore, Greenwich.	0.374	Not Supporting	Not Assessed	Not Supporting	Direct Consumption
CT-W2_024	LIS WB Shore - Byram Harbor, Greenwich	See Map for Boundaries. Western portion of LIS from just west of Shore Island to Field Point (includes Shore Island, Rich Island, Farwells Island, Game Cock Island, Byram Harbor) out approximately 1000 ft offshore, Greenwich.	0.34	Not Assessed	Not Supporting	Not Supporting	Direct Consumption

Table 3-4. Connecticut Impaired Waters List (EPA Category 5)

Waterbody Segment ID	Waterbody Name	Waterbody Type	Waterbody Size	Units	Impaired Designated Use	Cause	Comment
CT-W1_013-SB	LIS WB Inner - Norwalk Hrbr (Marvin Beach), Norwalk	Estuary	0.044	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Dissolved oxygen saturation	Potential sources include permitted and non-permitted stormwater, illicit discharge, insufficient septic systems, nuisance wildlife/pets
CT-W1_013-SB	LIS WB Inner - Norwalk Hrbr (Marvin Beach), Norwalk	Estuary	0.044	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Nitrogen (Total)	
CT-W1_013-SB	LIS WB Inner - Norwalk Hrbr (Marvin Beach), Norwalk	Estuary	0.044	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Nutrient/ Eutrophication Biological Indicators	
CT-W1_013-SB	LIS WB Inner - Norwalk Hrbr (Marvin Beach), Norwalk	Estuary	0.044	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Oxygen, Dissolved	
CT-W1_014-SB	LIS WB Inner - Fivemile River (mouth), Norwalk	Estuary	0.164	Square Miles	Commercial Shellfish Harvesting Where Authorized	Fecal Coliform	Potential source include industrial point source discharges, municipal discharges, landfills, illicit discharges, remediation sites, groundwater contamination
CT-W1_016-SB	LIS WB Inner - Holly Pond, Stamford	Estuary	0.31	Square Miles	Commercial Shellfish Harvesting Where Authorized	Fecal Coliform	Potential sources include groundwater contamination
CT-W1_018-SB	LIS WB Inner - Stamford Harbor (Inner), Stamford	Estuary	0.318	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Dissolved oxygen saturation	Potential sources include groundwater contamination
CT-W1_018-SB	LIS WB Inner - Stamford Harbor (Inner), Stamford	Estuary	0.318	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Nutrient/ Eutrophication Biological Indicators	Potential sources include groundwater contamination
CT-W1_018-SB	LIS WB Inner - Stamford Harbor (Inner), Stamford	Estuary	0.318	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Oxygen, Dissolved	
CT-W1_020	LIS WB Inner - Indian Harbor (upper), Greenwich	Estuary	0.025	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Dissolved oxygen saturation	Potential sources include industrial point source discharges, municipal discharges, illicit discharge, remediation sites, groundwater contamination

Table 3-4. Connecticut Impaired Waters List (EPA Category 5)

Waterbody Segment ID	Waterbody Name	Waterbody Type	Waterbody Size	Units	Impaired Designated Use	Cause	Comment
CT-W1_020	LIS WB Inner - Indian Harbor (upper), Greenwich	Estuary	0.025	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Nutrient/ Eutrophication Biological Indicators	Potential sources include industrial point source discharges, municipal discharges, illicit discharge, remediation sites, groundwater contamination
CT-W1_020	LIS WB Inner - Indian Harbor (upper), Greenwich	Estuary	0.025	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Oxygen, Dissolved	Potential sources include industrial point source discharges, municipal discharges, illicit discharge, remediation sites, groundwater contamination
CT-W1_021-SB	LIS WB Inner - Greenwich Harbor, Greenwich	Estuary	0.104	Square Miles	Commercial Shellfish Harvesting Where Authorized	Fecal Coliform	
CT-W1_021-SB	LIS WB Inner - Greenwich Harbor, Greenwich	Estuary	0.104	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Dissolved oxygen saturation	Potential sources include permitted and non-permitted stormwater, illicit discharge, insufficient septic systems, nuisance wildlife/pets
CT-W1_021-SB	LIS WB Inner - Greenwich Harbor, Greenwich	Estuary	0.104	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Nutrient/ Eutrophication Biological Indicators	
CT-W1_021-SB	LIS WB Inner - Greenwich Harbor, Greenwich	Estuary	0.104	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Oxygen, Dissolved	
CT-W2_001	LIS WB Shore - Lordship, Stratford	Estuary	0.409	Square Miles	Shellfish Harvesting for Direct Consumption Where Authorized	Fecal Coliform	
CT-W2_002	LIS WB Shore - Long Beach, Stratford	Estuary	0.458	Square Miles	Shellfish Harvesting for Direct Consumption Where Authorized	Fecal Coliform	Potential sources include permitted and non-permitted stormwater, insufficient septic systems, nuisance wildlife/pets
CT-W2_003	LIS WB Shore - Seaside Park Beach, Bridgeport	Estuary	0.492	Square Miles	Shellfish Harvesting for Direct Consumption Where Authorized	Fecal Coliform	Potential sources include permitted and non-permitted stormwater, insufficient septic systems, nuisance wildlife/pets

WITNESS: **WITNESS PANEL**
REQUEST FROM: **CONNECTICUT SITING COUNCIL**

QUESTION:

Referring to the Town's November 23, 2015 Report, page 19, estimate the number of trees exceeding 36 inches caliper that would be removed to construct each of the proposed routes through Bruce Park.

RESPONSE:

Until specificity is provided as to the precise location of construction activities of the proposed routes that would traverse Bruce Park, whether overhead or underground, and the location of the staging sites that would cause considerable impact to the areas in and around Bruce Park, it is difficult for the Town to estimate with any precision the number of trees with a diameter of 36 inches that would need to be removed.

Included in the Siting Council Application are several proposed underground feeder routes through a heavily wooded area, south of I-95 and north of Kinsman Lane. At present, this area is heavily treed and would likely require "clear cutting" in order for it to support the proposed directional drilling operation.

Many trees within the Park are configured with a network of low hanging limbs that would interfere with trucks hauling manholes, cable reels, cranes, and other specialty equipment. There a number of trees whose size is such that the roadway curves around them. Several of these curves make Kinsman Lane inaccessible to tractor trailer traffic.

It is estimated that 8 trees greater than or equal to 36 inches in diameter may be removed or seriously damaged by proposed construction activities. However, many more trees in Bruce Park will be lost in diameters ranging from 2 inches to 36 inches.

WITNESS: **WITNESS PANEL**
REQUEST FROM: **CONNECTICUT SITING COUNCIL**

QUESTION:

For trees lost to construction within Bruce Park, are replacement trees of the same species acceptable to the Town?

RESPONSE:

It is difficult to determine the exact impact to trees and the urban forest in Bruce Park without more detailed information relating to the exact route and the disturbance relating to any HDD operation. As indicated in response to CSC-14, there are many more trees that will be removed than just 36" caliper trees. Indeed any construction within Bruce Park would severely impact an urban forest which includes trees and shrubs of various sizes. Therefore, it is critical that any consideration of replacement of trees must not focus solely on individual tree species, but on the prospect of replacing this urban forest and all of the ecological functions of this forested area. The Town urges the Siting Council to avoid the siting of any transmission line in Bruce Park, in order to preserve its precious natural resources.

WITNESS: **WITNESS PANEL**
REQUEST FROM: **CONNECTICUT SITING COUNCIL**

QUESTION:

How many residential properties are directly impacted (i.e. through private residential properties) by the installation of the Bruce Park routes? Please list by address all residential properties for each variation.

RESPONSE:

At least 114 residential properties would be directly impacted by the installation of the Bruce Park routes, including those on Kinsman Lane, Bruce Park Drive, Indian Field Road, and Davis Avenue because of the magnitude of the proposed construction project. There are residential dwellings on Bruce Park Drive between Kinsman Lane and Indian Field Road and a substantial number of residences south of Davis Avenue on the peninsula formed by Indian Harbor and Cos Cob Harbor, for whom access to their homes is through Bruce Park and will be impacted.

It appears that at least 114 properties would be impacted by the installation of the Bruce Park routes.

The map and list of residential property owners is provided in Exhibit J.


INTERSTATE 95
INTERSTATE 95
RIVER PARK
COURT

PROPERTIES DIRECTLY IMPACTED BY DISTURBANCE IN BRUCE PARK

PROPERTY ADDRESS	OWNER1	OWNER2	OWNER ADDRESS	OWNER CITY	OWNER STAT	OWN_ZIP	TAX_ACCT	ACRES_GIS
COBB ISLAND DRIVE 0009	URFIRER MICHAEL J		9 COBB ISLAND	GREEENWICH	CT	06830	02-1596	5.83519380
INDIAN FIELD ROAD 0499	CONSERVATION INSTITUTE LLC		PO BOX 1234	WESTON	CT	06883	02-1183	25.92843054
DAVIS AVENUE 0410	STANTON NORMA J		410 DAVIS AVENUE	GREENWICH	CT	06830	02-1383	1.01142432
COBB ISLAND DRIVE 0000	COBB ISLAND DR PARK				CT	06105	02-9001	4.36217184
COBB ISLAND DRIVE 0010	DEFRUSCIO DIANNE		10 COBB ISLAND DRIVE	GREENWICH	CT	06830	02-1727	1.20944211
KINSMAN LANE 0005	TUBBS ADAM C & GARR LAURA J W/S		5 KINSMAN LANE	GREENWICH	CT	06830	02-1479	0.92997819
COBB ISLAND DRIVE 0026	BIRK MATTHEW & ADRIANNA		26 COBB ISLAND DRIVE	GREENWICH	CT	06830	02-1730	1.12649609
COBB ISLAND DRIVE 0027	LEVY BRETT M		27 COBB ISLAND DR	GREENWICH	CT	06830	02-1731	1.24783423
COBB ISLAND DRIVE 0023	23 COBB ISLAND LLC %IVEY BARNUM ETAL		170 MASON STREET	GREENWICH	CT	06830	02-1725	1.11308533
INDIAN FIELD ROAD 0110	SALVO CHRISTOPHER A &	SALVO CYNTHIA P	110 INDIAN FIELD RD	GREENWICH	CT	06830	02-1376	0.75436175
COBB ISLAND DRIVE 0025	WHATU LLC		25 COBB ISLAND DRIVE	GREENWICH	CT	06830	02-1726	1.27773740
COBB ISLAND DRIVE 0015	TAYLOR RICHARD LEE & DIANE K W/S		15 COBB ISLAND DR	GREENWICH	CT	06830	02-1723	0.99211579
COBB ISLAND DRIVE 0011	RIPP PETER & BARBARA		11 COBB ISLAND DRIVE	GREENWICH	CT	06830	02-1713	1.14943794
KINSMAN LANE 0006	SESSA MARIANNE		6 KINSMAN LANE	GREENWICH	CT	06830	02-1598	0.76709182
KINSMAN LANE 0002	PAPE KATRINA MARIA VITAGLIANO	ET AL W/S	2 KINSMAN LANE	GREENWICH	CT	06830	02-1475	0.52277896
INDIAN FIELD ROAD 0108	HUBBARD BURNICE F		108 INDIAN FIELD RD	GREENWICH	CT	06830	02-1512	0.75963084
INDIAN FIELD ROAD 0100	TOWN OF GREENWICH		101 FIELD POINT RD	GREENWICH	CT	06830	02-4557	4.35831130
BRUCE PARK DRIVE 0052	DOUGLAS ANDREA		52 BRUCE PARK DRIVE	GREENWICH	CT	06830	02-1507	0.83277618
COBB ISLAND DRIVE 0020	MCGUINN DONNA J		20 COBB ISLAND DR	GREENWICH	CT	06830	02-1729	1.49025026
COBB ISLAND DRIVE 0019	MUNERA GERARD E & PAULA A TR		19 COBB ISLAND DRIVE	GREENWICH	CT	06830	02-1724	1.04321239
COBB ISLAND DRIVE 0016	MARCIANO DANIEL F & VIRGINIA K		16 COBB ISLAND DR	GREENWICH	CT	06830-7244	02-1728	1.56105132
COBB ISLAND DRIVE 0007	FERTIG NANCY G TR & WILLIAM D TR		7 COBB ISLAND DR	GREENWICH	CT	06830	02-1586	4.26113174
BRUCE PARK DRIVE 0054	YOUNG JOHN & SARYNA W/S		54 BRUCE PARK DRIVE	GREENWICH	CT	06830	02-1590	1.08717199
INDIAN FIELD ROAD 0101	INDIAN FIELD SCH		101 INDIAN FIELD RD	GREENWICH	CT	06830	02-4003	2.88885254
INDIAN FIELD ROAD 0066	GRUNOW JOHN E D III &	NOYES EMILY W/S	66 BRUCE PARK DRIVE	GREENWICH	CT	06830	02-1504	0.75014865
BRUCE PARK DRIVE 0044	BRODERICK MIRANDA M & DANIEL J W/S		44 BRUCE PARK DRIVE	GREENWICH	CT	06830	02-1600	0.57295101
COBB ISLAND DRIVE 0003	FERTIG NANCY G TR & WILLIAM D TR		7 COBB ISLAND DRIVE	GREENWICH	CT	06830	02-1710	5.90059510
BRUCE PARK DRIVE 0048	JONES CHRISTOPHER P &	KUHN PAMELA D W/S	48 BRUCE PARK DR	GREENWICH	CT	06830	02-1599	0.52041246
KINSMAN LANE 0004	STROIE ADRIAN & MALGORZATA W/S		4 KINSMAN LANE	GREENWICH	CT	06830	02-1477	0.63698742
COBB ISLAND DRIVE 0001	ANNUNZIATA VINCENT P & DEBRA ANN W/S		1 COBB ISLAND DRIVE	GREENWICH	CT	06830	02-1709	2.00093614
COBB ISLAND DRIVE 0000	COBB ISLAND DRIVE PARK				CT	06105	02-9000	3.23772024
BRUCE PARK DRIVE 0046	GESTAL JOSE R & LAURA FILKA W/S		46 BRUCE PARK DRIVE	GREENWICH	CT	06830	02-1601	0.78144065
KINSMAN LANE 0003	MORGAN CECILIA H TR		3 KINSMAN LANE	GREENWICH	CT	06830	02-1480	0.56585891
BRUCE PARK DRIVE 0042	SCHIEFFELIN TIMOTHY P & SUSAN U		42 BRUCE PARK DRIVE	GREENWICH	CT	06830	02-1437	2.37393563
BRUCE PARK DRIVE 0032	ALBRIZIO FLORENCE EST	C/O MICHAEL J ALBRIZIO ET AL	5A COLUMBUS AVENUE	GREENWICH	CT	06830	02-1438	0.83542009
BRUCE PARK DRIVE 0038	CLINE MARY ANNE		38 BRUCE PARK DRIVE	GREENWICH	CT	06830	02-1537	1.00470320
BRUCE PARK DRIVE 0040	DUBOIS SERENA D		40 BRUCE PARK DR	GREENWICH	CT	06830	02-1527	0.75000227
INDIAN FIELD ROAD 0200	TOWN OF GREENWICH C/O FINANCE DEPT		101 FIELD POINT RD	GREENWICH	CT	06830	02-4517	0.06975220
DAVIS AVENUE 0420	CAHILL THOMAS J & SUSAN E W/S		420 DAVIS AVE	GREENWICH	CT	06830	02-1247	1.15295957
INDIAN CHASE DRIVE 0005	LIMPE STEPHEN T & TRACY TANG		5 INDIAN CHASE DRIVE	GREENWICH	CT	06830	02-1391	1.36051876
KINSMAN LANE 0001	STACY PARKER		1 KINSMAN LA	GREENWICH	CT	06830	02-1478	0.57384715
INDIAN FIELD ROAD 0502	GORDON ROBERT & LINDA W/S		502 INDIAN FIELD ROAD	GREENWICH	CT	06830	02-1407	2.05699416
INDIAN CHASE DRIVE 0022	22 INDIAN CHASE DRIVE LLC	% HENRY W PASCARELLA	675 STEAMBOAT ROAD	GREENWICH	CT	06830	02-1005	1.16455098
INDIAN FIELD ROAD 0504	FEDA THOMAS & LAURA W/S		504 INDIAN FIELD ROAD	GREENWICH	CT	06830	02-1409	2.10930909
INDIAN CHASE DRIVE 0001	TRAISMAN NELLY & YURI W/S		1 INDIAN CHASE DRIVE	GREENWICH	CT	06830	02-1361	1.88550350
MEAD POINT DRIVE 0001	MCNULTY MICHAEL F & SARAH S W/S		ONE MEADS POINT ROAD	GREENWICH	CT	06830	02-1461	0.99990376
INDIAN FIELD ROAD 0531	DFTIV LLC		1 GLENDINNING PLACE	WESTPORT	CT	06880	02-1182	4.55775332
MEAD POINT DRIVE 0008	MAIER HANS-HENNING TR &	MAIER-MOELDERS FELICITAS TR W/S	8 MEAD POINT DRIVE	GREENWICH	CT	06830	02-1402	1.00053947
MEAD POINT DRIVE 0005	COOK RANDOLPH & MAGDALENE K W/S		5 MEAD POINT DRIVE	GREENWICH	CT	06830	02-1356	1.00140508
INDIAN CHASE DRIVE 0004	JOHNSON HERBERT M TR & GEORGE F TR	C/O GEORGE J JOHNSON TR	PO BOX 79049	CHARLOTTE	NC	28271	02-1434	0.99993281
INDIAN FIELD ROAD 0595	MCKEEVER MICHAEL F & VALERIE W W/S		595 INDIAN FIELD RD	GREENWICH	CT	06830-7218	02-1143	3.06279305
INDIAN FIELD ROAD 0600	600 INDIAN FIELD ROAD LLC		600 INDIAN FIELD ROAD	GREENWICH	CT	06830-0000	02-1579	3.97320951
INDIAN FIELD ROAD 0561	GUGELMANN JUNE & JEANNETTE A		561 INDIAN FIELD ROAD	GREENWICH	CT	06830-0000	02-1393	1.11001973

INDIAN FIELD ROAD 0000	NIPOWIN LN PRIVATE RD			GREENWICH	CT	06830	02-9003	0.83072632
INDIAN FIELD ROAD 0569	SPERLING LAWRENCE D & JANE A W/S		569 INDIAN FIELD ROAD	GREENWICH	CT	06830	02-1281	0.87667080
INDIAN FIELD ROAD 0549	MOSSMAN JAMES		549 INDIAN FIELD ROAD	GREENWICH	CT	06830	02-1385	1.95500047
INDIAN FIELD ROAD 0511	PETRICK LESLIE ANDERSON &	MICHAEL JOHN TR	511 INDIAN FIELD ROAD	GREENWICH	CT	06830	02-1408	6.77545878
INDIAN CHASE DRIVE 0010	SHAW JUSTIN & JENNIFER W/S		10 INDIAN CHASE DRIVE	GREENWICH	CT	06830	02-1451	0.99993314
INDIAN FIELD ROAD 0545	CERCY CHRISTOPHER D & LEASON W/S		545 INDIAN FIELD ROAD	GREENWICH	CT	06830	02-1003	1.42339896
INDIAN FIELD ROAD 0596	596 INDIAN FIELD ROAD LLC	C/O ROBERT P MCGRAW	PO BOX 1000	SLEEPY HOLLOW	NY	10591	02-1578	3.12789047
DAVIS AVENUE 0000	TOWN OF GREENWICH C/O FINANCE DEPT		101 FIELD POINT RD	GREENWICH	CT	06830	02-4579/S	0.22337413
DAVIS AVENUE 0409	OSSORIO MICHAEL L & MARIANA G		409 DAVIS AVE	GREENWICH	CT	06830	02-1605	0.98180216
INDIAN CHASE DRIVE 0018	BROTHERS BROOK II LLC	% GEOFF CARTER	PO BOX 1104	NEW CANAAN	CT	06840-0000	02-1066	1.00476739
MEAD POINT DRIVE 0009	NESS PHILIP W JR		9 MEAD POINT DR	GREENWICH	CT	06830	02-1209	0.99989076
INDIAN CHASE DRIVE 0025	ZOUBEK CHARLES L & MARTHA R		25 INDIAN CHASE DRIVE	GREENWICH	CT	06830	02-1551	1.28129891
MEAD POINT DRIVE 0006	LANE SEAN P & ELIZABETH RYAN W/S		6 MEAD POINT DRIVE	GREENWICH	CT	06830	02-1134	0.99997003
WINDROSE WAY 0002	FRENKEL FELIKS TR		17 EAST 89TH ST-APT 11A	NEW YORK	[illegible]	10128	02-1632	2.00061208
INDIAN FIELD ROAD 0565	GESTAL DEAN P & JANET S W/S		565 INDIAN FIELD ROAD	GREENWICH	CT	06830	02-1074	0.89235116
INDIAN FIELD ROAD 0505	PETRICK MICHAEL TR		511 INDIAN FIELD ROAD	GREENWICH	CT	06830	02-1622	3.94255063
INDIAN CHASE DRIVE 0021	DAWSON MARION MARGERY		21 INDIAN CHASE DR	GREENWICH	CT	06830	02-1067	1.01060783
WINDROSE WAY 0006	DORNIER DANIEL SERGEY &	AUDREY WON W/S	6 WINDROSE WAY	GREENWICH	CT	06830	02-1634	2.01974912
INDIAN FIELD ROAD 0573	TIMASHEV RATMIR		573 INDIAN FIELD ROAD	GREENWICH	CT	06830	02-1347	2.13388025
WINDROSE WAY 0016	SON VIDA LLC		445 GRAND BAY DRIVE	KEY BISCAYNE	FL	33149	02-1636	1.99792105
INDIAN CHASE DRIVE 0006	ROACH JOHN L & JENNIFER W/S		6 INDIAN CHASE DRIVE	GREENWICH	CT	06830	02-1018	2.01722073
INDIAN CHASE DRIVE 0000	INDIAN CHASE DR PRIVATE ROAD			GREENWICH	CT	06830	02-9010	0.16232737
INDIAN CHASE DRIVE 0011	LEJR & SSF REALTY PTRNRSHPS (DE) LPS	%PRIVET CAPITAL LLC	555 THEODORE FREMD AVE #C-207	RYE	NY	10580	02-1339	1.92377975
INDIAN FIELD ROAD 0599	GROSSMAN STEVEN		599 INDIAN FIELD ROAD	GREENWICH	CT	06830	02-1520	0.79325557
INDIAN FIELD ROAD 0000	BAR-WIL ASSOCIATION C/O WILLIAM E		INDIAN FIELD RD	GREENWICH	CT	06830	02-9002	0.54000816
INDIAN FIELD ROAD 0527	BAUM STEPHEN H TR		1 NIPOWIN LANE	GREENWICH	CT	06830	02-1555	1.97248117
INDIAN FIELD ROAD 0567	US BANK NATIONAL ASSOC TR	RMAC TRUST SERIES 2012-4T	60 LIVINGSTON AVE	ST PAUL	MN	55107	02-1088	0.89273873
INDIAN FIELD ROAD 0616	JEPSEN PETER G & BROOKE S W/S		616 INDIAN FIELD ROAD	GREENWICH	CT	06830	02-1639	2.02271060
WINDROSE WAY 0021	MEADPOINT LLC		712 FIFTH AVENUE	NEW YORK	[illegible]	10009	02-1629	1.99750675
WINDROSE WAY 0022	BURKE NANCY B		22 WINDROSE WAY	GREENWICH	CT	06830	02-1637	1.92838862
WINDROSE WAY 0025	JAYAWEERA ERIC R & NADYA PODOLSKY	W/S	25 WINDROSE WAY	GREENWICH	CT	06830	02-1630	2.08625766
INDIAN FIELD ROAD 0585	OMALLEY THOMAS D TR ETAL		HORSE ISLAND MEAD POINT	GREENWICH	CT	06830	02-1435	3.36520043
INDIAN FIELD ROAD 0541	NIPOWIN LLC		C/O 1 GLENDINNING PLACE	WESTPORT	CT	06880	02-1063	1.31451062
INDIAN FIELD ROAD 0622	CUNNIFFE JANE M TR EST	% MAURICE J CUNNIFFE	622 INDIAN FIELD ROAD	GREENWICH	CT	06830	02-1613	3.76285680
INDIAN FIELD ROAD 0606	606 INDIAN FIELD ROAD LLC	C/O ROBERT P MCGRAW	PO BOX 1000	SLEEPY HOLLOW	NY	10591	02-1580	2.27491991
WINDROSE WAY 0024	LAMPKE ALVAN G TR & CAROL J TR		24 WINDROSE WAY	GREENWICH	CT	06830	02-1638	2.03742914
WINDROSE WAY 0028	GEREN DANIEL KENNETH & KATIY W/S		28 WINDROSE WAY	GREENWICH	CT	06830-0000	02-1631	2.69134821
INDIAN FIELD ROAD 0553	GUNDERS FAMILY LLC		553 INDIAN FIELD ROAD	GREENWICH	CT	06830	02-1651	2.00157065
INDIAN FIELD ROAD 0601	BARNETT SLOAN LINDEMANN TR	% BARNETT FAMILY OFFICE SEILER & CO	3 LAGOON DRIVE STE 400	REDWOOD CITY	CA	94065	02-1164	9.57579621
INDIAN FIELD ROAD 0557	DAIGLE DAVID A & ELIZABETH L W/S		557 INDIAN FIELD RD	GREENWICH	CT	06830	02-1418	1.10310736
WINDROSE WAY 0004	MANNHEIM REALTY LLC	ATTN ANDREA BERKOWITZ	712 FIFTH AVE-32ND FL	NEW YORK	NY	10019	02-1633	1.94125037
WINDROSE WAY 0000	WINDROSE PARK PARK		WINDROSE WAY	GREENWICH	CT	06830	02-9005	4.67032602
INDIAN FIELD ROAD 0579	DOYLE ELYSIA ANN		579 INDIAN FIELD ROAD	GREENWICH	CT	06830	02-1454	2.72053331
WINDROSE WAY 0009	OMALLEY TOMAS D JR & LILLIAN M W/S		9 WINDROSE WAY	GREENWICH	CT	06830	02-1192	1.99755496
WINDROSE WAY 0001	KELLY JOSEPH J & KELLY JILL T		ONE WINDROSE WAY	GREENWICH	CT	06830	02-1627	1.94814232
INDIAN FIELD ROAD	1L MANDORIO LLC	C/O BRICK & PATEL LLP	1290 AVE OF THE AMERICAS 34TH FL	NEW YORK	NY	10104	02-1612	19.49715048
WINDROSE WAY 0015	HOLNIS LLC		712 FIFTH AVE 32 FLR	NEW YORK	NY	10019	02-1628	2.00470574
INDIAN FIELD ROAD 0597	SCHUBIN MYRA ET AL TR		597 INDIAN FIELD ROAD	GREENWICH	CT	06830	02-1521	1.07175021
INDIAN FIELD ROAD 0530	SHAVEL STEFANI J TR & LEONARD B TR		530 INDIAN FIELD RD	GREENWICH	CT	06830-0000	02-1077	4.30481138
INDIAN CHASE DRIVE 0014	14 INDIAN CHASE LLC	% GEOFF CARTER	PO BOX 1104	NEW CANAAN	CT	06840-0000	02-1239	1.00183728
MEAD POINT DRIVE 0012	HOLBROOK CHRISTOPHER CAMERON &	ALICE BUSCH W/S	12 MEAD POINT DR	GREENWICH	CT	06830	02-1436	1.00071302
INDIAN FIELD ROAD 0529	DFDJV LLC		1 GLENDINNING PLACE	WESTPORT	CT	06880	02-1813	2.04871494
INDIAN FIELD ROAD	DFDJV LLC		ONE GLEDINNING PLACE	WESTPORT	CT	06880	02-9017	1.02585019
INDIAN FIELD ROAD 0514	ADAME OMAR R EST & MARGARET C		514 INDIAN FIELD RD	GREENWICH	CT	06830	02-1410	2.85645883
MEAD POINT DRIVE 0010	GEFFS TOLMAN F & LAURA H W/S		10 MEAD POINT DRIVE	GREENWICH	CT	06830	02-1144	1.00105600

INDIAN CHASE DRIVE 0012	HARMAN SPENCER REED &	KAREN LEONARD W/S	332 BLEECKER STREET, H32	NEW YORK	NY	10014	02-1251	0.99983820
INDIAN FIELD ROAD 0520	GAYOLA GEORGE M & ELIZABETH J W/S		520 INDIAN FIELD ROAD	GREENWICH	CT	06830	02-1017	2.60697375
INDIAN FIELD ROAD 0000	520 INDIAN FIELD ROAD ASSOCIATION		215 BALDWIN ST	WEST SPRINGFIELD	MA	01089	02-9015	2.32997145
INDIAN FIELD ROAD 0518	PLAUT EDWARD W		518 INDIAN FIELD ROAD	GREENWICH	CT	06830	02-1411	2.19023714
INDIAN FIELD ROAD 0526	SEN ANIK KUMAR & ROSEMARY PATRICIA	W/S	526 INDIAN FIELD RD	GREENWICH	CT	06830	02-1790	2.44992532
DAVIS AVENUE 0416	KYRIAKOS NICHOLAS P		62 MASON ST	GREENWICH	CT	06830	02-1382	0.98888419

WITNESS: **WITNESS PANEL**
REQUEST FROM: **CONNECTICUT SITING COUNCIL**

QUESTION:

Of the four proposed routes through Bruce Park (P HDD, P Open Trench, BPV1 HDD, BPV2 HDD), which route would the Town prefer?

RESPONSE:

The Town vehemently opposes all of the four proposed routes through Bruce Park. Any such construction would have a devastating environmental impact to the Park, with excessive costs being charged to Connecticut ratepayers. Based on the record, it is impossible for the Town to determine which of the four proposed routes through Bruce Park would have the least impact, but it is clear that all four routes would have significant adverse impacts to the Park and its neighboring residences. In light of the statutory requirement that the approval of any transmission line must take into account environmental impacts and costs, and in light of the fact that the Applicant has conceded that the hybrid overhead / underground MNRR route is capable of being constructed in a timely fashion, and at far less cost, the Town believes that all four proposed routes through Bruce Park should not be considered by the Siting Council.

WITNESS: **WITNESS PANEL**
REQUEST FROM: **CONNECTICUT SITING COUNCIL**

QUESTION:

What is the Town's position regarding the new proposed hybrid overhead/underground route? (referenced in Eversource's Late File Exhibit LF003 submitted on November 25, 2015, and described in the January 12, 2016 Transcript beginning on page 82)

RESPONSE:

As described above, the Town questions the need for the new Greenwich Substation and 115-kV transmission line, and believes that less intrusive and cheaper alternatives should be adopted to meet the electrical needs of the Town, including adding larger capacity transformers at the Cos Cob substation. To the extent the Siting Council concludes that the Applicant has met its burden of proving the need for the project, the Town supports the proposed hybrid overhead / underground route identified in LFE-03. This route is the only transmission line route presented which avoids a potentially devastating impact to Bruce Park. If the hybrid route is approved, the Town believes that the eastern most portion of the underground line in Segment 4 should be extended to meet the penultimate overhead pole in Segment 3, or alternatively the last pole in Segment 3 should be offset so that it is not as visible from the four corners of Greenwich Avenue, Bruce Park, Steamboat Road, and Railroad Avenue, which is a prominent area of the downtown. (See Eversource Response to CSC-03 dated December 14, 2015, Photo No. 1)

Further, to the extent the Siting Council approves siting of an overhead line in Segment 2B (on the south side of the railroad tracks), the Town is concerned that actual construction must be undertaken with consideration to the location of existing sewer mains. Any construction of the transmission line must also take into account future Town needs with respect to the sewer mains.

WITNESS: **WITNESS PANEL**
REQUEST FROM: **CONNECTICUT SITING COUNCIL**

QUESTION:

Referring to the Town's November 23, 2015 Report pages 24-25 (Town's proposed route behind residential backyards), please clarify the following:

a) Does Town parcel mapping show the subject right-of way inside or outside of these residential lots? If not, please submit parcel mapping that demonstrates property ownership along the subject right-of-way.

b) How many residential properties does the existing right-of-way traverse along Circle Drive, Circle Drive Extension, and Woodside Drive?

c) How much space would be required to construct the underground route in the right of way?

d) How would construction vehicles access the right-of-way in residential backyards?

e) Has the Town approached any of the adjacent property owners of the Town's suggested alternative? What was their response?

f) Approximately how many trees would need to be removed along the right-of-way at Circle Drive, Circle Drive Extension, and Woodside Drive to accommodate construction and operation of the Town's suggested alternative?
In regards to replacing trees that are removed on private residential property to construct the Town's suggested alternative; what tree height at planting is the Town proposing? Would this tree height be sufficient to replace lost trees that serve as a vegetative visual and noise barrier to I-95 and MNRR?

h) Would rock blasting and/or chipping be expected to install the suggested underground line in the residential backyards?

i) Why would construction of the Bruce Park route be "..noisier, dirtier..." than the Town's suggested underground route through residential backyards?

WITNESS: WITNESS PANEL
REQUEST FROM: CONNECTICUT SITING COUNCIL

j) What route and installation method is the Town proposing from 147 Woodside Drive to the proposed substation? Please characterize land use along the suggested route.

RESPONSE:

The Town initially proposed an examination of this alternative route in an effort to identify an alternative to the Applicant's Preferred Route which would have devastating impacts to Bruce Park with excessive costs to Connecticut ratepayers. The Town believes that less intrusive and cheaper alternatives to meet the electrical needs of the Town should be fully examined, including adding larger capacity transformers at the existing Cos Cob substation. The suggested route described above was merely an attempt to identify another route worthy of study, if the Siting Council was willing to examine alternatives to the Applicant's proposal. While the Town appreciates the Siting Council's questioning as to the viability of this route, the Town does not purport to have the engineering expertise to be able to perform the detailed study and analysis necessary to be able to answer the interrogatories posed. Rather, the Town suggested the route precisely so that Eversource would perform the analysis necessary to consider alternative options to traversing through Bruce Park.

At the January 12, 2016 hearing, the Applicant testified that it could construct the proposed transmission line along the MNRR corridor in accordance with LFE-03. To the extent that the Siting Council believes that the Applicant has met its burden of proving a need for this project, and based on the Applicant's testimony regarding constructability and reduced costs, the Town supports the siting of the transmission line along the MNRR corridor as depicted in LFE-03. See Town's Response to Interrogatory CSC-18. In light of the viability of the siting of the line along

WITNESS: **WITNESS PANEL**
REQUEST FROM: **CONNECTICUT SITING COUNCIL**

the MNRR corridor as depicted in LFE-03, the Town understands that the alternative route it suggested on pages 24-25 of the November 23, 2015 submission may now be moot.