

STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

IN RE: :  
 :  
APPLICATION OF CELLCO PARTNERSHIP : DOCKET NO. 448  
D/B/A VERIZON WIRELESS FOR A :  
CERTIFICATE OF ENVIRONMENTAL :  
COMPATIBILITY AND PUBLIC NEED FOR :  
THE CONSTRUCTION, MAINTENANCE :  
AND OPERATION OF A WIRELESS :  
TELECOMMUNICATIONS FACILITY AT :  
831 DERBY MILFORD ROAD, ORANGE, :  
CONNECTICUT : AUGUST 5, 2014

APPLICANT'S RESPONSE TO THE SITING  
COUNCIL'S REQUEST FOR ADDITIONAL INFORMATION

At the July 17, 2014 evidentiary hearing in Docket No. 448, the Connecticut Siting Council ("Council") asked the Applicant, Cellco Partnership d/b/a Verizon Wireless ("Cellco" or the "Applicant"), for additional information regarding the wireless facility describe in the Docket No. 448 application (the "Application"). Below are the Applicant's responses.

1. The Council asked for clarification regarding abutting property owners in the southerly portion of the 831 Derby Milford Road parcel. A discrepancy exists in the location of property lines shown on the aerial photograph included in the executive summary and behind Tab 1 of the Application. We have confirmed that the abutting property owners identified on the revised abutters map, (Cellco Exhibit No. 7) accurately depicts property owned by Stephen A. and Linda M. Bspuda shown as Parcel Id. No. 77/3/2 and 77/3/8&9 and by Raymond E. & Maryellen Holden Parcel Id. No. 77/3/10 . The property lines depicted on the aerial photograph are not accurate.

2. The Council asked if development rights to the subject parcel had been acquired by the State of Connecticut as part of the farmland preservation program described in Conn Gen. Stat. Section 22-26b. Included in Attachment 1 is a copy of a November 14, 2013 title search summary sheet and a title bring-down to July 30, 2014 for the subject parcel. There is no indication in this title report that the development rights for the subject parcel have been acquired by the State of Connecticut.

3. The Council asked for a breakdown of how many residential parcels or portions of residential parcels with seasonal and year-round views are within 1,000 feet of the tower site and asked for the street addresses of those parcels.

At least a portion of 27 parcels are located within 1,000 feet of the proposed facility location. Based on APT's conservative computer modeling and results of its balloon float in March 2014 (during "leaf-off conditions"), it is estimated that approximately 15 of these properties may experience year-round views of at least some part of the facility, while an additional 12 parcels could have seasonal views. Those properties are identified in the table below (those without numerical street addresses are identified by their Assessor's Block, Map and Lot designations).

Note that for several of the parcels included within 1,000 feet of the proposed site location, only a small percentage of the property falls within the specified radius. In addition, the estimates of visibility provided herein do not necessarily represent that predicted views would be achieved from within residential dwellings, exterior decks, porches, patios or lawn areas that might be located on such properties. They are based on the combined results of computer modeling and field observations from publicly accessible locations, as presented in the Visibility Analysis report provided in Celco's Application.

Residential Properties within 1,000 feet	Potential Views
New Haven Jewish Cemetery	Year-round
899 Derby Milford Road	Year-round
831 Derby Milford Road	Year-round
Derby Milford Road (76-4-2)	Year-round
Derby Milford Road (76-4-1)	Year-round
Derby Milford Road (76-2-4)	Year-round
Derby Milford Road (76-2-3)	Year-round
821 Derby Milford Road	Year-round
814 Glenbrook Road	Year-round
Garden Road (77-3-8 & 9)	Year-round
870 Garden Road	Year-round
Garden Road (86-1-1-15A)	Seasonal
837 Quarter Mile Road	Year-round
838 Quarter Mile Road	Year-round
831 Quarter Mile Road	Year-round
832 Quarter Mile Road	Seasonal
825 Quarter Mile Road	Seasonal
598 High Ridge Road	Year-round
616 High Ridge Road	Seasonal
608 High Ridge Road	Seasonal
893 Rainbow Trail	Seasonal
899 Rainbow Trail	Seasonal
905 Rainbow Trail	Seasonal
911 Rainbow Trail	Seasonal
917 Rainbow Trail	Seasonal
923 Rainbow Trail	Seasonal
Undeveloped parcel off Short Road	Seasonal

4. Included in Attachment 2 is a summary and associated data to support Cellco's need for capacity relief from existing cell sites surrounding the Orange North search area. Cellco's RF Design Engineers will be prepared to discuss this information further at the August 12, 2014 evidentiary hearing.

5. Included in Attachment 3 is the Avian Study requested for the proposed Orange North facility.

6. The Council asked for a clarification regarding back-up generator run times (Cellco Exh. 3 Q. 3) and the generator permit requirements (Applicant's Exh. 1, Attachment 1 p. 7). As discussed in the Application, under normal operating conditions, the generator will run for 20 minutes, once a week while it is exercised. This equates to 1,040 minutes, or 17.3 hours of operation a year. At full load, Cellco's equipment operates at approximately 30 kW. Under

these conditions, Cellco's Generac SD050 (50 kW) generator, with a 210 gallon fuel tank could run continuously for approximately 78 hours before refueling is required.


In addition, Cellco offers the following replacement language to Section I. B. of the Environmental Assessment Statement (Applicant's Exh. 1, Attachment 1 p. 7):

***Under normal operating conditions, the Cellco equipment at the Orange North Facility would generate no air emissions. During power outage events and periodically for maintenance purposes, Cellco would utilize a diesel-fueled generator to provide emergency back-up power. Cellco's back-up generator will be managed to comply with the "permit by rule" criteria established by the Connecticut Department of Energy and Environmental Protection ("DEEP") Bureau of Air Management pursuant to R.C.S.A. § 22a-174-3b, and therefore is exempt from general air permit requirements.***

**CERTIFICATE OF SERVICE**

I hereby certify that on this 5<sup>th</sup> day of August, 2014, a copy of the foregoing was sent via electronic mail and first class mail, postage prepaid, to the following:

Albert Subbloie c/o Mario F. Coppola, Esq. Mark Kovack, Esq. Berchem, Moses and Devlin, P.C. 1221 Post Road East Westport, CT 06880 mcoppola@bmdlaw.com mkovack@bmdlaw.com	Jacqueline Barbara c/o Mario F. Coppola, Esq. Mark Kovack, Esq. Berchem, Moses and Devlin, P.C. 1221 Post Road East Westport, CT 06880 mcoppola@bmdlaw.com mkovack@bmdlaw.com
Glenn Macinnes c/o Mario F. Coppola, Esq. Mark Kovack, Esq. Berchem, Moses and Devlin, P.C. 1221 Post Road East Westport, CT 06880 mcoppola@bmdlaw.com mkovack@bmdlaw.com	Jill Macinnes c/o Mario F. Coppola, Esq. Mark Kovack, Esq. Berchem, Moses and Devlin, P.C. 1221 Post Road East Westport, CT 06880 mcoppola@bmdlaw.com mkovack@bmdlaw.com
State Senator Gayle Slossberg Legislative Office Building Room 2000 Hartford, CT 06106 gslossberg@yahoo.com	State Representative Paul Davis Legislative Office Building Room 4045 Hartford, CT 06106 paul.davis@cga.ct.gov
State Representative Themis Klarides Legislative Office Building Room 4200 Hartford, CT 06106 themis.klarides@housegop.ct.gov	State Representative James Maroney Legislative Office Building Room 5006 Hartford, CT 06106 james.maroney@cga.ct.gov

  
\_\_\_\_\_  
Kenneth C. Baldwin

# **ATTACHMENT 1**

CARMODY & TORRANCE FILE NO. 22904-937

Town of Orange

SEARCHED FROM 11/14/13 to 07/30/14 at 8:00 am

PROPERTY ADDRESS: 831 Derby Milford Road

**OWNER: Walter M. Bespuda and Maryellen K. Bespuda, Trustees of the Walter M. Bespuda and Maryellen K. Bespuda Living Trust.**

Searched premises described in title search summary sheet of Quinnipiac Title Services, LLC.

Appurtenant Rights in Not Searched

Assessor's Map 77, Block 3, Lot 1

**Limited Search**

SUBJECT TO:

1. Items appearing in Title Search Summary Sheet of Quinnipiac Title Services, LLC dated November 14, 2013.
2. Memorandum of Land Lease Agreement between Walter M. Bespuda and Maryellen K. Bespuda, Trustees of the Walter M. Bespuda and Maryellen K. Bespuda Living Trust and Celco Partnership d/b/a Verizon Wireless dated February 26, 2014 and recorded on March 17, 2014 in Volume 638 at Page 494.

Real estate taxes on the October 1, 2013 Grand List in the total amount of \$8,791.24, first installment of \$4,395.24 has not been paid. Assessed Value \$285,430.00

Searched by NW Number of Days \_\_\_\_\_ office time \_\_\_\_\_ Reviewed by \_\_\_\_\_  
[W2413979]

Quinnipiac Title Services, LLC  
One Evergreen Avenue, Suite LL-6  
Hamden, Connecticut 06518  
Telephone (203)288-3425 Fax (203)288-3450  
www.QuinnipiacTitle.com

TITLE SEARCH SUMMARY SHEET

ISSUED TO: Cellco Partnership dba Verizon Wireless

SEARCHER: DCI Q.T.S. FILE NO.: 13-1897

SEARCHED THROUGH: *November 14, 2013 @ 8:00 a.m.*

PROPERTY ADDRESS: **831 Derby Milford Road  
Orange, Connecticut**

START/ROOT DEED: November 7, 1931

TITLE VESTED IN: **Walter M. Bespuda and Maryellen K. Bespuda,  
Trustees of the Walter M. Bespuda and Maryellen K.  
Bespuda Living Trust**

BY VIRTUE OF: Quit Claim Deed from Walter M. Bespuda and Maryellen  
K. Bespuda to Walter M. Bespuda and Maryellen K.  
Bespuda, Trustees of the Walter M. Bespuda and Maryellen K.  
Bespuda Living Trust dated November 6, 2003 and  
recorded November 6, 2003 in Volume 509 at Page 678 of  
the Orange Land Records.

DESCRIPTION: SEE ATTACHED SCHEDULE "A."

SUBJECT TO: ALL ITEMS APPEARING ON SAID DEED COPY AND  
TO THE FOLLOWING:

1. Real Estate taxes due the Town of Orange on the  
Grand List of October 1, 2012, first half due July 1,  
2013, reported to be paid; second half due January  
1, 2014, not yet paid, and all taxes which may  
become due and payable thereafter.
2. Any taxes which may be hereafter assessed or  
levied by virtue of new construction completed or  
partially completed.



3. Right of Way and Damage Agreement to Northeastern Gas Transmission Company dated December 5, 1951 and recorded December 14, 1951 in Volume 159 at Page 543 of the Orange Land Records. As amended by Amending Right of Way Agreement by and between Walter and Maryellen Bepuda and Tennessee Gas Pipeline Company dated December 15, 1999 and recorded March 9, 2000 in Volume 440 at Page 824 and Page 827 of the Orange Land Records.
4. Certificate of Approval by the Town of Orange Town Plan and Zoning Commission dated May 6, 1994 and recorded August 9, 1994 in Volume 386 at Page 674 of the Orange Land Records.
5. Notes and notations as shown on Map No. 295-A on file in the Orange Town Clerk's Office.

**ADDITIONAL NOTES:**

**NO OPEN MORTGAGES FOUND.**

**Flood Info: Zone X. Panel 416 of 635. Map No. 09009C0416H. Effective Date: December 17, 2010. See enclosed copy.**

**THE RESULTS OF THIS SEARCH ARE DEPENDENT UPON THE ACCURACY OF THE INDICES GENERATED AND MAINTAINED BY OTHERS. THIS SEARCH DOES NOT COVER MATTERS OF RECORD IF SAME WERE NOT PROPERLY INDEXED.**

**THIS SUMMARY IS ISSUED FOR THE SOLE USE AND BENEFIT OF (AND LIABILITY IS LIMITED ONLY TO) THE PERSON OR PERSONS TO WHOM IT IS ISSUED.**

THIS INFORMATION IS BEING REPORTED AFTER AN EXAMINATION OF THE  
LAND RECORDS, AS INDEXED, OF THE ABOVE REFERENCED TOWN.

QUINNIPIAC TITLE SERVICES, LLC

A handwritten signature in black ink, consisting of a stylized 'Q' followed by a horizontal line.

BY: \_\_\_\_\_  
DULY AUTHORIZED

SEARCHER ACCEPTS NO LIABILITY FOR PAST DUE TAX WHEN THE  
MUNICIPALITY HAS ACCEPTED A TAX PAYMENT AND HAS NOT PROPERLY  
APPLIED SAME AS REQUIRED UNDER CONNECTICUT GENERAL STATUTES  
12-144B (AS REVISED).

PROPERTY INFORMATION REPORT  
(For Informational Purposes Only)

Q.T.S. FILE NO.: 13-1897  
CASE NO.: 22094-937  
CURRENT OWNER: Walter M. Bespuda and Maryellen K. Bespuda,  
Trustees of the Walter M. Bespuda and Maryellen  
K. Bespuda Living Trust

PROPERTY LOCATION: 831 DERBY MILFORD ROAD  
ORANGE, CONNECTICUT

ASSESSOR'S MAP	BLOCK	LOT	PARCEL
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GROSS ASSESSED VALUE:	\$289,030.00
EXEMPTIONS:	NONE
NET ASSESSED VALUE:	SEE ABOVE

MILL RATE: 30.5000	LIST NO.: 00123800
TOTAL TAX: \$8,815.42	TAX YEAR: 2012
PAYMENT DATES: SEMI-ANNUALLY	

SEWER ASSESSMENT: NONE REPORTED  
FIRE DISTRICT: N/A  
OTHER ASSESSMENTS AND/OR TAXES: NONE REPORTED. REPORTED  
TO BE WELL & SEPTIC.

SUBDIVISION MAP: SEE DESCRIPTION

COMMENTS:

SCHEDULE "A"  
(Description)  
831 Derby Milford Road, Orange, CT

Parcel 1

Being a parcel of land as shown on a map entitled, "Conveyance of Property, Walter and Mary Ellen Bospuda, Derby-Milford Road, Garden Road, and Rainbow Trail, Orange, CT" dated 04/07/03, by Codespoti & Associates, P.C., Surveyors of Stratford, Connecticut, REV 11/6/03, SCALE 1" = 100' ON FILE IN THE ORANGE TOWN CLERK'S OFFICE AS MAP # 295-A .

Beginning at a point on the east side of Derby-Milford Road at the southwest corner of land *n/w* of Beth Israel Synagogue Inc.

Thence, N 65°14'58" E, 40.69 feet to a point;

Thence, N 60°11'57" E, 69.62 feet to a point;

Thence, N 50°22'00" E, 39.86 feet to a point;

Thence, N 42°43'31" E, 119.38 feet to a point;

Thence, N 45°48'06" E, 154.77 feet to a point;

Thence, N 36°17'42" W, 181.16 feet to a point;

Thence, N 76°40'11" W, 355.18 feet to a point;

Thence, N 44°31'17" E, 343.42 feet to a point;

Thence, N 56°29'42" E, 482.76 feet to a point;

Thence, N 43°48'36" E, 249.33 feet to a point;

Thence, S 56°21'08" E, 976.21 feet to a point;

Thence, S 37°29'24" W, 1,510.50 feet to a point;

Thence, S 23°57'36" W, 140.00 feet to a point;

Thence, N 78°15'24" W, 61.84 feet to a point;

Thence, N 80°20'22" W, 140.40 feet to a point on the east side of Derby-Milford Road;

Thence the following courses along the east side of Derby-Milford Road, N 31°55'11" W, 186.51 feet to a point;

Thence, N 27°37'30" W, 68.00 feet to a point;

Thence, N 22°41'39" W, 142.46 feet to a point;

Thence, N 18°47'06" W, 200.38 feet to a point;

Thence, N 30°55'14" W, 121.71 feet to the point of beginning.

In all containing 34.80± acres.

Together with Easement for ingress and egress across Parcel II as set forth in a Quit Claim Deed dated November 2, 2005 and recorded November 3, 2005 in Volume 542 at Page 287 of the Orange Land Records.



VOL. 386 PAGE 674  
Town of Orange, Connecticut

TOWN PLAN AND ZONING COMMISSION  
TOWN HALL  
ORANGE, CONNECTICUT 06477

May 8, 1994  
CERTIFIED MAIL

Mr. Walter Bospuda  
831 Derby-Milford Road  
Orange, CT 06477

CERTIFICATE OF APPROVAL

Application for Special Use  
Sale and/or Processing of Agricultural Products

Property of Bospuda, 831 Derby-Milford Road

Dear Mr. Bospuda:

This is to inform you that at a meeting held on May 3, 1994, the Orange Town Plan and Zoning Commission approved the above referenced Special Use application.

Please note that any expansion of sale items or change in the scope of use will require a new application.

This Special Use shall become effective when you file this Certificate of Approval on the Land Records in the Office of the Orange Town Clerk in accordance with the provisions of Section 8-2d of the Connecticut General Statutes. A filing fee will be charged.

Very truly yours,

*Anthony F. Mauro*  
Anthony F. Mauro, Chairman  
Town Plan & Zoning Commission

mjw

Received for Record *Aug 9 1994*  
at *2:15* m. *PM*, and recorded by

*Jean Y. Fitcher* Town Clerk



# **ATTACHMENT 2**

Docket No. 448 - Summary of RF Data and Information that Demonstrates a Need for the Orange North Facility.

Coverage

1. Existing gaps in reliable wireless service depicted clearly on the coverage plots included in Applicant's Exhibit 1, Attachment 6.
2. Gaps in reliable wireless service exist in Cellco's 700 MHz and 2100 MHz frequency ranges along portions of Route 34, Route 110, Route 121 and other areas surrounding these routes. Similar gaps exist at Cellco's 850 MHz and 1900 MHz frequencies.
3. Cellco's coverage design threshold is - 85 dBm signal strength throughout its network, nationwide.

Capacity

1. Cellco's capacity problems in Orange and throughout its network in Connecticut and nationwide are directly related to the exponential growth in customer demand for high speed wireless data services.
2. In New England, Cellco has established a design goal of 4 Megabits per second (Mbps) download speeds for all of its data services. The company's ultimate goal is to achieve data rates of 5 – 12 Mbps download speed throughout its network nationwide.
3. Cellco has developed a proprietary analytical tool to help it evaluate and monitor the data usage in each sector of each cell site in its network. The tool allows Cellco to monitor the growth of data usage in those particular antenna sectors and forecast when that sector is going to exhaust its' capacity limit. Cellco reviews this data on a monthly basis to develop capacity trending. This trending allows Cellco to make intelligent decisions regarding how to meet current and future capacity needs.
4. The capacity data analyzed for these antenna sectors includes:
  - a. **Forward Data Volume (FDV)** which measures the amount of data transmitted from a sector of a cell site to the data user for a specific busy hour
  - b. **Average Scheduled Eligible Users (ASEU)** which measures how many customers are using a particular sector of a cell site at the established threshold limits.
  - c. **Average Active Connections (AvgAC)** which measures active connections to the sector of the cell site being evaluated.
5. All of this data is charted and monitored to determine if a particular antenna sector of a particular cell site is operating within its individual site capacity limits; at what rate the



usage is growing; and when the capacity of that particular antenna sector will reach its capacity limits.

6. Attached to this summary are a series of charts and graphs, showing the actual data Cellco's RF design engineers analyzed to determine that several sectors in the area of the proposed Orange North cell site are approaching their capacity limits. A summary of this data is presented for your review.

#### Milford NE CT – Alpha Sector

- Over the previous eighteen months, Cellco's analytical tool has projected this sector as an exhausting sector in sixteen months. Notable is that fifteen of these sixteen months have come consecutively, since April of 2013, which indicates a severe increase in capacity demand. Over the previous fifteen months, this sector has seen a 209% increase in FDV, which represents the amount of over the air data processed by this sector on our LTE network. Additionally, since April of 2013, a 206% increase in AvgAC, which represents the number of users accessing the LTE network by connecting to this sector.

#### Derby CT – Beta Sector

- Over the previous eighteen months, Cellco's analytical tool has projected this sector as an exhausting sector in eight months. Notable is that seven of these eight months have come consecutively, since December of 2013, which indicates a stable, continued trend of capacity demand increase. Over the previous eighteen months, this sector has seen an 87.3% increase in AvgAC, which represents the number of users accessing the LTE network by connecting to this sector. Additionally, since December of 2013, a 31.4% increase in FDV has occurred, which represents the amount of over the air data processed by this sector on our LTE network.

#### Derby North CT – Gamma Sector

- Over the previous eighteen months, Cellco's analytical tool has projected this sector as an exhausting sector in six months. Notable is that five of these six months have come in the first half of 2014, which indicates a stable, continued trend of capacity demand increase. Over the first half of 2014, this sector has seen a 9.2% increase in FDV, which represents the amount of over the air data processed by this sector on our LTE network.

The same data was analyzed for our existing Orange 2 CT, Orange 3 CT, and Shelton 2 CT cell sites. Cellco's analysis of the data showed that while data usage at these particular cell sites has increased, the site still operates within the sector's capacity limits. For those sites operating within their existing limits, the tool can also forecast when a particular site will reach that capacity limit.

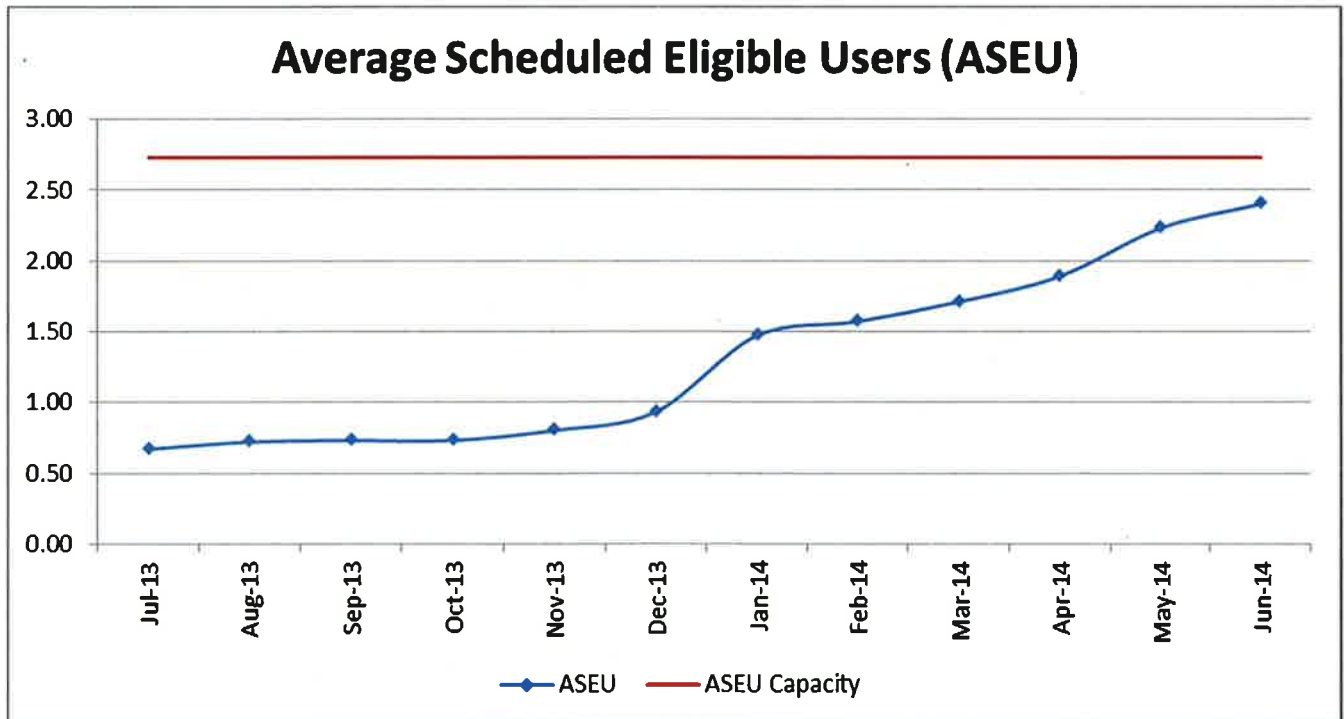
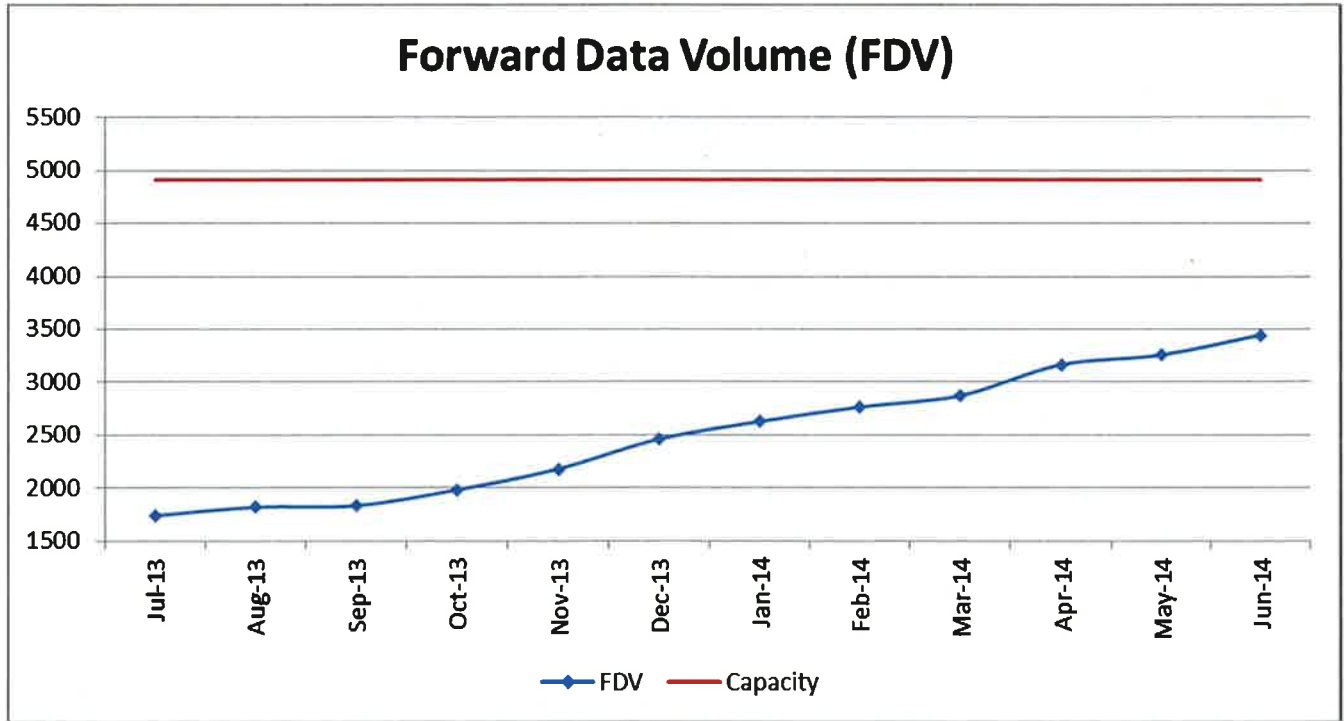
## Orange North CT - List of Surrounding Sectors

Cell Name	Sector	Summary
MILFORD NE CT	Alpha	FDV = 3444 ASEU = 2.4 AvgAC = 55.54 PrjdToExhaust = 9/14/2014
DERBY CT	Beta	FDV = 3838.65 ASEU = 2.17 AvgAC = 52.52 PrjdToExhaust = 1/25/2016
DERBY NORTH CT	Gamma	FDV = 2042.32 ASEU = 1.01 AvgAC = 23.58 PrjdToExhaust = 9/7/2015
SHELTON 2 CT	Beta	FDV = 1760.31 ASEU = 0.74 AvgAC = 29.74 PrjdToExhaust = Beyond 3 years
ORANGE 2 CT	Gamma	FDV = 1615.42 ASEU = 0.48 AvgAC = 18.46 PrjdToExhaust = Beyond 3 years
ORANGE 3 CT	Alpha	FDV = 1357.97 ASEU = 0.22 AvgAC = 11.87 PrjdToExhaust = Beyond 3 years

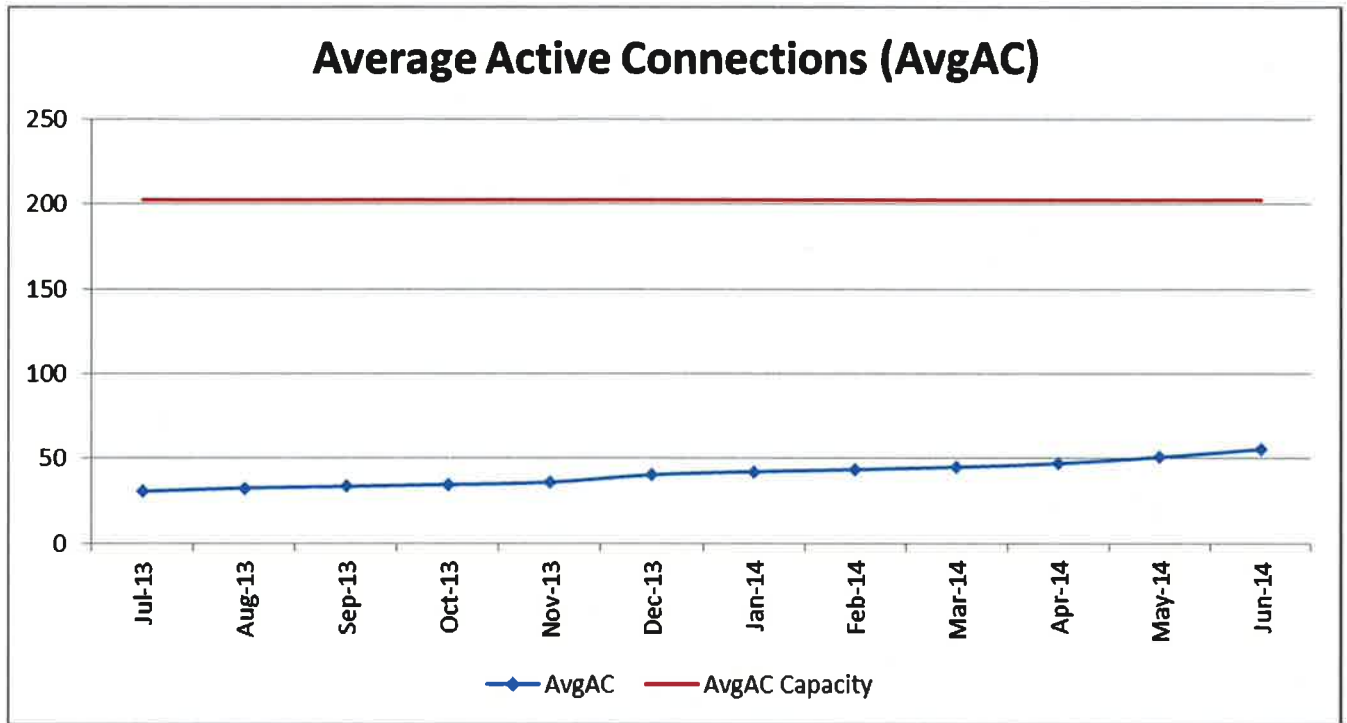
## Surrounding Sectors' Exhaust Date History

Exhaust Report Date (Mmm-YYYY)	DERBY CT - Beta	DERBY NORTH CT - Gamma	MILFORD NE CT - Alpha	SHELTON 2 CT - Beta
Jul-2013		9/9/2014	2/9/2015	6/19/2015
Aug-2013			12/5/2014	
Sep-2013			12/21/2014	
Oct-2013			12/7/2014	
Nov-2013			10/9/2014	
Dec-2013	12/10/2015		5/27/2014	
Jan-2014	5/15/2014	5/14/2015	1/31/2014	
Feb-2014	2/28/2014	1/4/2015	2/28/2014	9/1/2015
Mar-2014	3/31/2014	9/8/2015	3/31/2014	5/29/2016
Apr-2014	8/29/2014	6/11/2015	8/16/2014	10/14/2016
May-2014	11/13/2014		8/28/2014	3/6/2017
Jun-2014	1/25/2016	9/7/2015	9/14/2014	

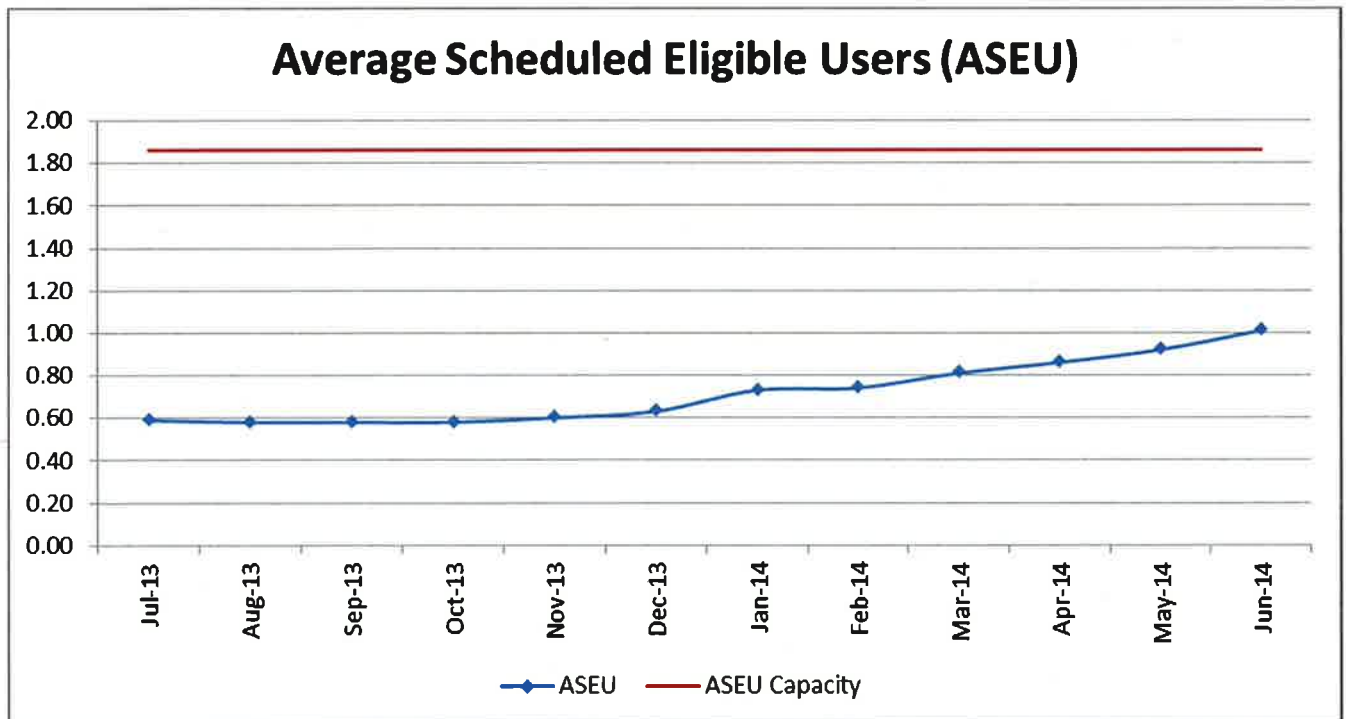
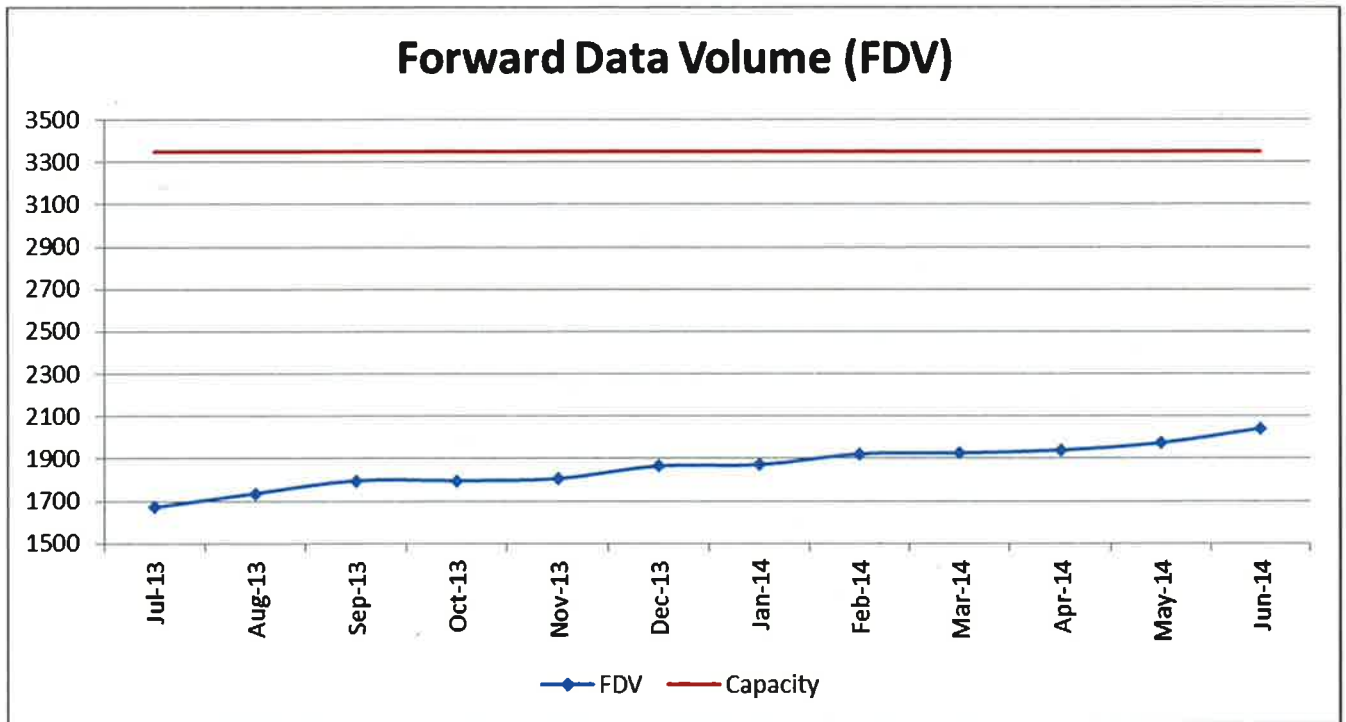
### Milford NE CT Alpha Sector Exhaust Analysis Data



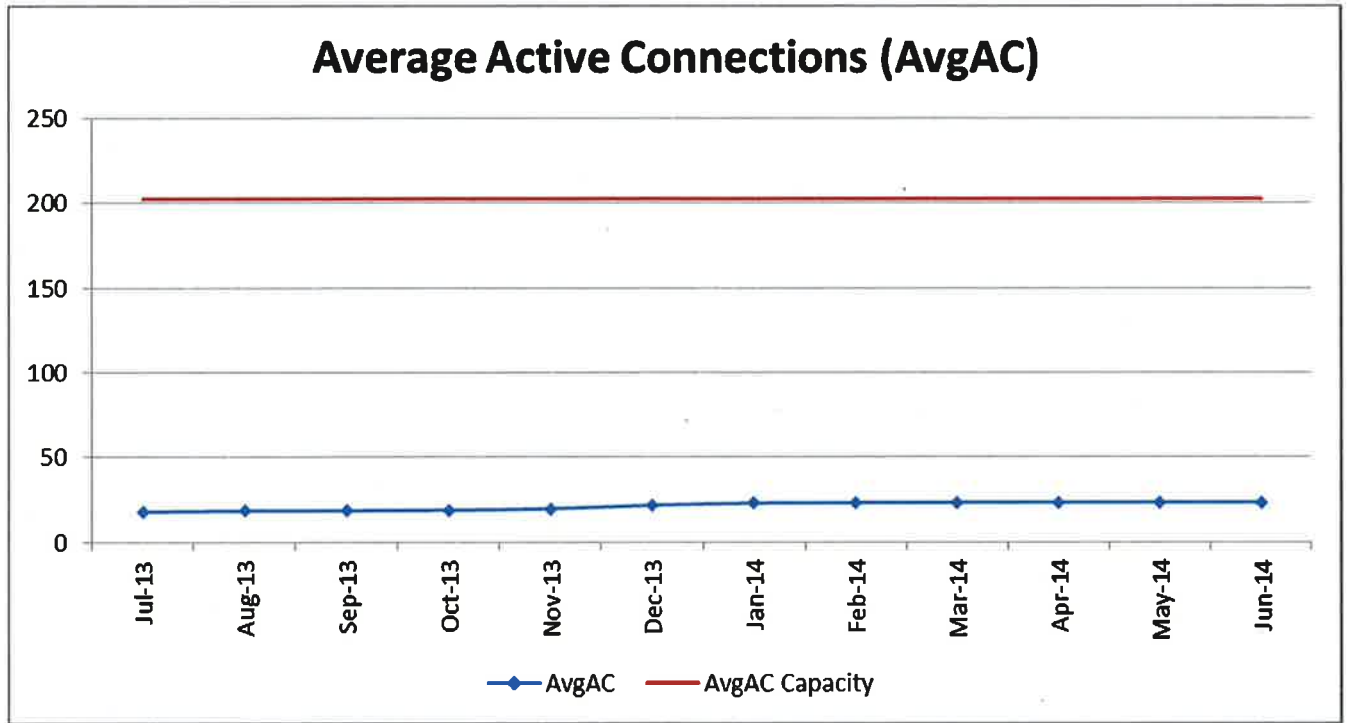
**Milford NE CT Alpha Sector Exhaust Analysis Data (Continued)**



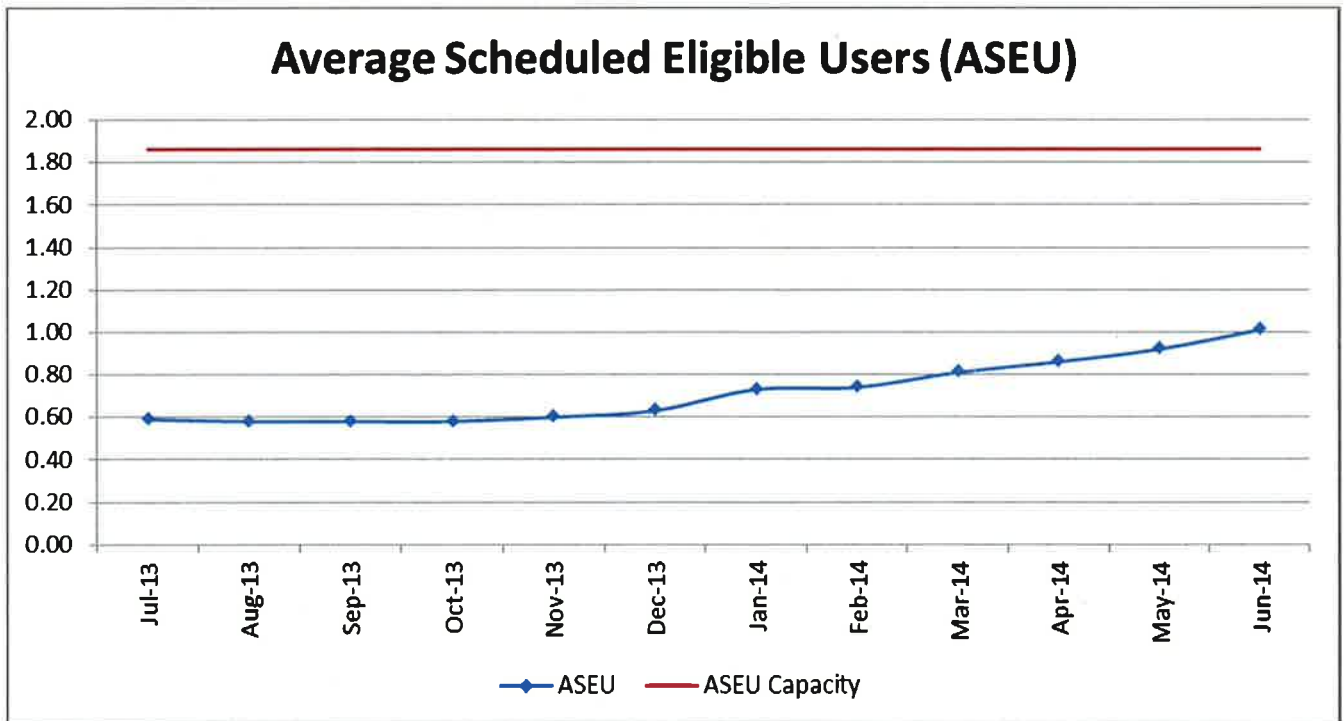
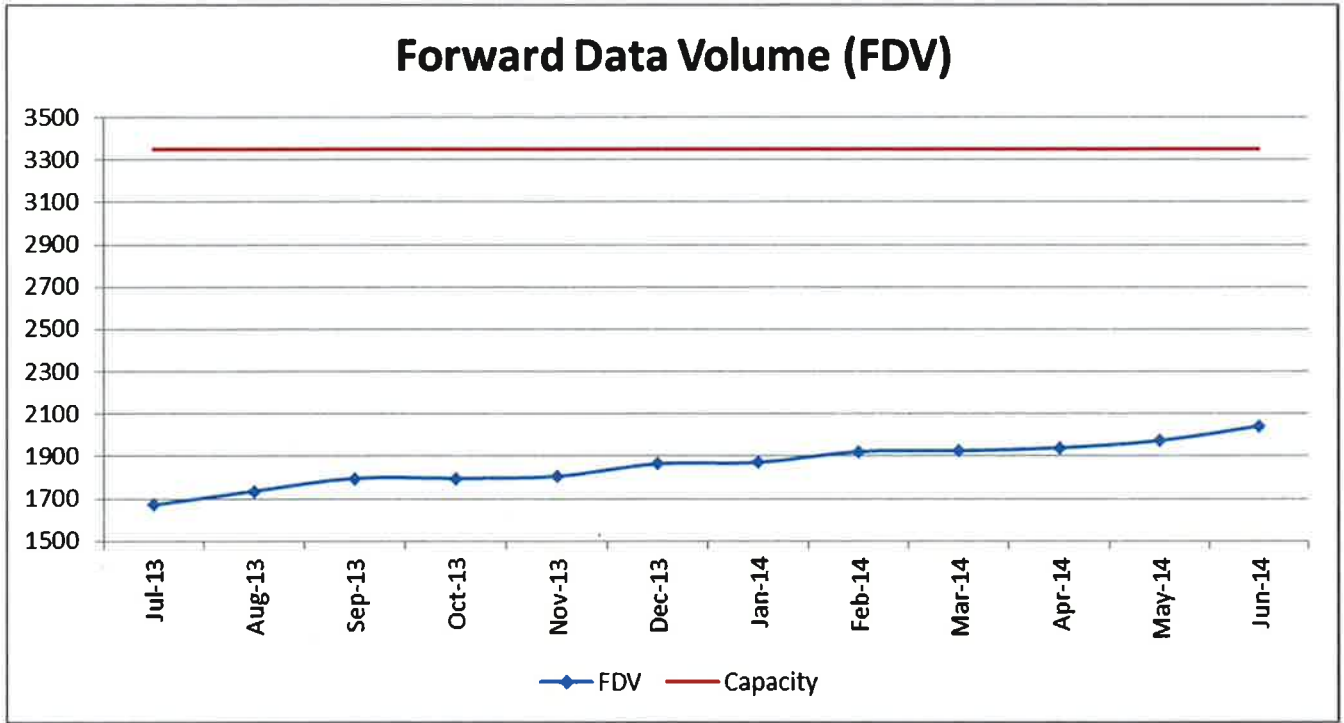
## Derby CT Beta Sector Exhaust Analysis Data



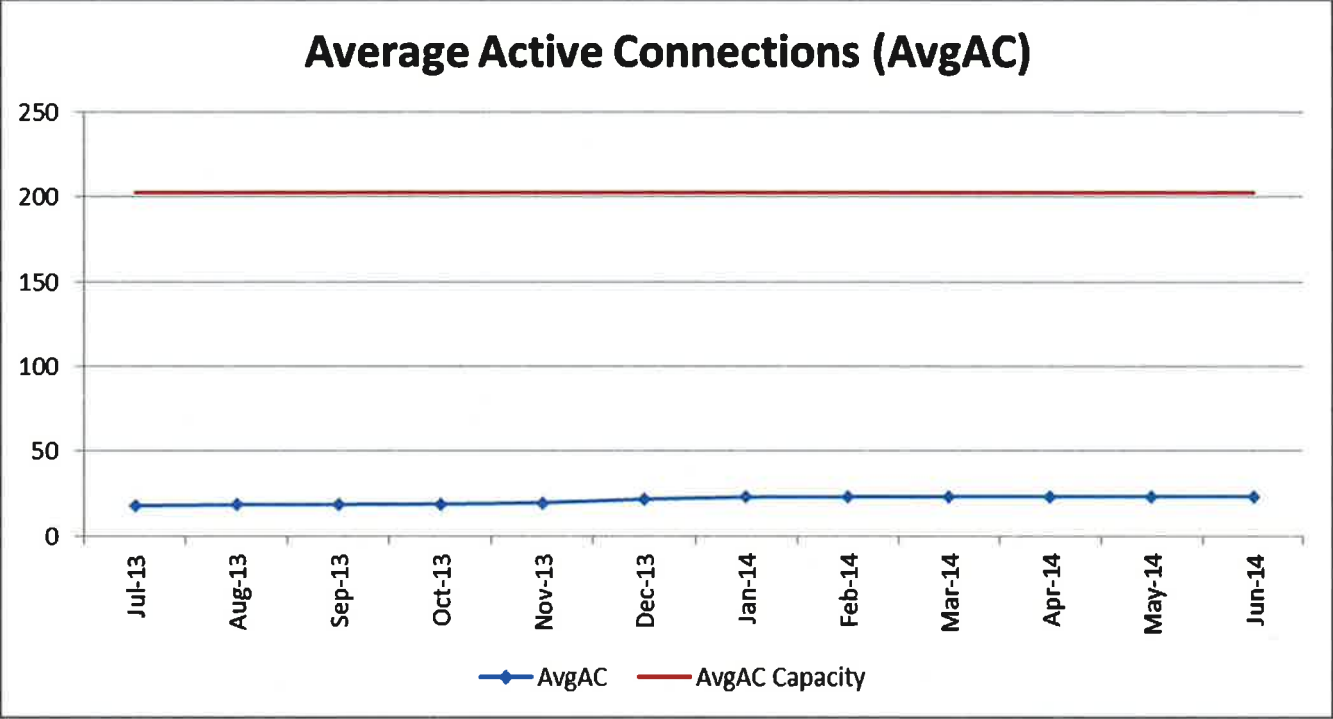
**Derby CT Beta Sector Exhaust Analysis Data (Continued)**



### Derby North CT Gamma Sector Exhaust Analysis Data



Derby North CT Gamma Sector Exhaust Analysis Data (Continued)





# **ATTACHMENT 3**



## AVIAN RESOURCES EVALUATION

**Date: August 4, 2014**

**Ms. Alexandria Carter  
Verizon Wireless  
99 East River Drive  
East Hartford CT 06108**

**APT Project No.: CT1411690**

**Re: Proposed Orange North Facility  
831 Derby Milford Road  
Orange, Connecticut**

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Cellco Partnership d/b/a Verizon Wireless (“Verizon”) proposes to construct a new wireless telecommunications Facility (“Facility”) at 831 Derby Milford Road in Orange, Connecticut (the “host Property”). The proposed Orange North cell site would be located in the central portion of an approximately 34.5 acre parcel owned by the Walter M. and Maryellen K. Bepuda Living Trust, which is part of an active farming operation. The Facility would consist of a 100-foot monopole and a 12' x 30' equipment shelter located near the base of the tower. The shelter would house Verizon's radio equipment and a diesel-fueled back-up generator. The tower and equipment shelter will be maintained within a 50' x 50' fenced compound, in a 100' x 100' leased parcel. Verizon's antennas would be mounted with their centerline at the 100-foot level, resulting in an overall Facility height of 103 feet above ground level (“AGL”). Vehicular access to the Facility site would extend from Derby Milford Road over a new 12-foot wide gravel driveway for a distance of approximately 460 feet. The area proposed for the Facility is located in a mostly cleared upland area dominated by early successional forest habitat.

This evaluation is provided in response to avian-related questions posed by the Connecticut Siting Council (the “Council”) during the July 17, 2104 hearing for Docket No. 448, which included: the proposed tower’s location with respect to any “Important Bird Area” as designated by the National Audubon Society; and, the proposed tower’s compliance with recommended guidelines of the United States Fish and Wildlife Service for minimizing the potential for telecommunications towers to impact bird species.

All-Points Technology Corporation, P.C. (“APT”) reviewed several publicly-available sources of avian data for the state of Connecticut to provide the following information with respect to potential impacts on migratory birds associated with the proposed development. This desktop analysis and attached graphics identify avian resources and their proximities to the host Property. Information within an approximate 3 to 4 mile radius of the host Property is graphically depicted on the attached Avian Resources Map. Some of the avian data referenced herein are not located in proximity to the host Property and are therefore not

visible on the referenced map due to its scale. However, in those cases the distances separating the host Property from the resources are identified in the discussions below.

### **Proximity to Important Bird Areas**

The National Audubon Society has identified 27 Important Bird Areas (“IBAs”) in the state of Connecticut. IBAs are sites that provide essential habitat for breeding, wintering, and/or migrating birds. The IBA must support species of conservation concern, restricted-range species, species vulnerable due to concentration in one general habitat type or biome, or species vulnerable due to their occurrence at high densities as a result of their congregatory behavior<sup>1</sup>. The closest IBA to the host Property is Sandy Point in West Haven located approximately 7 miles to the southeast. Sandy Point is a city-owned barrier beach (sand spit) system with a tidal creek, an area of tidal marsh and tidal flats. It is one of the most significant nesting locations for the federally threatened Piping Plover, and also host to one of the most important Least Tern and mainland Common Tern colonies in the state. Sandy Point receives significant usage by migrating shorebirds, which roost on the sand spit and sandbars at high tide and forage on the tidal flats at lower tides. Due to its distance from the site, this IBA would not experience an adverse impact resulting from the proposed development of the Facility.

### **Supporting Migratory Bird Data**

Beyond Audubon’s IBAs, the following analysis and attached graphics also identify several additional avian resources and their proximities to the host Property. Although these data sources may not represent habitat indicative of important bird areas, they may indicate possible bird concentrations<sup>2</sup> or migratory pathways.

### **Critical Habitat**

Connecticut Critical Habitats depict the classification and distribution of 25 rare and specialized wildlife habitats in the state. It represents a compilation of ecological information collected over many years by state agencies, conservation organizations and individuals. Critical habitats range in size from areas less than one acre to areas that are tens of acres in extent. The Connecticut Critical Habitats information can serve to highlight ecologically significant areas and to target areas of species diversity for land conservation and protection but may not necessarily be indicative of habitat for bird species. The nearest Critical Habitat to the proposed Facility is an eustuarine intertidal marsh area, denoted as the Turkey Creek Marsh along the Housatonic River in Milford located approximately 2.25 miles to the south. Based on the distance separating this resource from the host Property, no adverse impacts are anticipated from development of the proposed Facility.

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<sup>1</sup> [http://web4.audubon.org/bird/iba/iba\\_intro.html](http://web4.audubon.org/bird/iba/iba_intro.html)

<sup>2</sup> “bird concentrations” is related to the USFWS *Interim Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers* (September 14, 2000) analysis provided at the end of this document

## **Avian Survey Routes and Points**

### **Breeding Bird Survey Route**

The North American Breeding Bird Survey is a cooperative effort between various agencies and volunteer groups to monitor the status and trends of North American bird populations. Routes are randomly located to sample habitats that are representative of an entire region. Each year during the height of the avian breeding season (June for most of the United States) participants skilled in avian identification collect bird population data along roadside survey routes. Each survey route is approximately 24.5 miles long and contains 50 stops located at 0.5-mile intervals. At each stop, a three-minute count is conducted. During each count, every bird seen or heard within a 0.25-mile radius is recorded. The resulting data is used by conservation managers, scientists, and the general public to estimate population trends and relative abundances and to assess bird conservation priorities. The nearest survey route to the host Property is the Long Hill Breeding Bird Survey Route (Route #18013) located approximately 10 miles to the west. This  $\pm 25$ -mile long bird survey route begins on the Easton/Trumbull town line and generally winds its way north through Monroe, Newtown, and Southbury before terminating in Roxbury. Since bird survey routes represent randomly selected data collection areas, they do not necessarily represent a potential restriction to development projects, including the proposed Facility.

### **Hawk Watch Site**

The Hawk Migration Association of North America (“HMANA”) is a membership-based organization committed to the conservation of raptors through the scientific study, enjoyment and appreciation of raptor migration. HMANA collects hawk count data from almost 200 affiliated raptor monitoring sites throughout the United States, Canada and Mexico, identified as “Hawk Watch Sites.” In Connecticut, Hawk Watch Sites are typically situated on prominent hills and mountains that tend to concentrate migrating raptors. The nearest Hawk Watch Site, Maltby Lakes, is located in Orange, approximately 3.9 miles to the east of the proposed Facility.

Most hawks migrate during the day (diurnal) to take advantage of two theorized benefits: (1) diurnal migration allows for the use of updrafts or rising columns of air called thermals to gain lift without flapping thereby reducing energy loss; and, (2) day migrants can search for prey and forage as they migrate. Therefore, no adverse impacts to migrating hawks are anticipated with development of the Facility, based on the  $3.9\pm$  mile separation distance to a principal migration corridor (Maltby Lakes Hawk Watch Site) and hawk migration behavior occurring during the daytime under favorable weather conditions when thermals form.

## Bald Eagle Site

Bald Eagle Sites consist of locations of midwinter Bald Eagle counts from 1986 to 2005 with an update provided in 2008. This survey was initiated in 1979 by the National Wildlife Federation. This database includes information on statewide, regional and national trends. Survey routes are included in the database only if they were surveyed consistently in at least four years and where at least four eagles were counted in a single year. The nearest Bald Eagle Site survey route to the host Property is located along the Housatonic River approximately 1,735 feet west of the host Property.

Bald Eagle migration patterns are complex, dependent on age of the individual, climate (particularly during the winter) and availability of food.<sup>3</sup> Adult birds typically migrate alone and generally as needed when food becomes unavailable, although concentrations of migrants can occur at communal feeding and roost sites. Migration typically occurs during the middle of day (10:30–17:00) as thermals provide for opportunities to soar up with limited energetic expense; Bald Eagle migration altitudes are estimated to average 1,500–3,050 m by ground observers.<sup>4</sup> Four adults tracked by fixed-wing aircraft in Montana averaged 98 km/d during spring migration and migrated at 200–600 m above ground (McClelland et al. 1996).<sup>5</sup>

Therefore, no adverse impacts to migrating Bald Eagle are anticipated with development of the Facility, based on the short (103-foot) height of the Facility and eagle migrate patterns during the daytime under favorable weather conditions when thermals form.

## Flyways

The host Property is located in New Haven County, approximately 6 miles north of Long Island Sound. The Connecticut coast lies within the Atlantic Flyway, one of four generally recognized regional primary migratory bird flyways (Mississippi, Central and Pacific being the others). This regional flyway is used by migratory birds travelling to and from summering and wintering grounds. The Atlantic Flyway is particularly important for many species of migratory waterfowl and shorebirds, and Connecticut's coast serves as vital stopover habitat. Migratory land birds also stop along coastal habitats before making their way inland. Smaller inland migratory flyways ("secondary flyways) are often concentrated along major riparian areas as birds use these valuable stopover habitats to rest and refuel as they make their way further inland to their preferred breeding habitats. The Connecticut Migratory Bird Stopover Habitat

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<sup>3</sup> Buehler, David A. 2000. Bald Eagle (*Haliaeetus leucocephalus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/506> [Accessed 09/09/13].

<sup>4</sup> Harmata, A. R. 1984. Bald Eagles of the San Luis valley, Colorado: their winter ecology and spring migration. Ph.D. Thesis. Montana State Univ. Bozeman.

<sup>5</sup> McClelland, B. R., P. T. McClelland, R. E. Yates, E. L. Caton, and M. E. McFadden. 1996. Fledging and migration of juvenile Bald Eagles from Glacier National Park, Montana. *J. Raptor Res.* 30:79-89.

Project (Stokowski, 2002)<sup>6</sup> identified potential flyways along the Housatonic, Naugatuck, Thames, and Connecticut Rivers. This study paralleled a similar earlier study conducted by the Silvio O. Conte National Fish & Wildlife Refuge (Neotropical Migrant Bird Stopover Habitat Survey<sup>7</sup>), which consisted of collection of migratory bird data along the Connecticut River and the following major Connecticut River tributaries: Farmington, Hockanum, Scantic, Park, Mattabesset, Salmon, and Eight Mile Rivers. These major riparian corridors may provide secondary flyways as they likely offer more food and protection than more exposed upland sites, particularly during the spring migration<sup>8</sup>. Of these potential flyways, the nearest to the host Property is the Housatonic River, located approximately 1,735 feet to the west.

Siting of tower structures within flyways can be a concern, particularly for tall towers and even more particularly for tall towers with guy wires and lighting. The majority of studies on bird mortality due to towers focuses on very tall towers (greater than 1000 feet), illuminated with non-flashing lights, and guyed. These types of towers, particularly if sited in major migratory pathways, do result in significant bird mortality (Manville, 2005)<sup>9</sup>. The proposed Facility is not this type of tower, being an unlit, unguyed monopole structure only 103 feet in height AGL with affixed antennas. More recent studies of short communication towers (<300 feet) reveal that they rarely kill migratory birds<sup>10</sup>. Studies of mean flight altitude of migrating birds reveal flight altitudes of 410 meters (1350 feet), with flight altitudes on nights with bad weather between 200 and 300 meters above ground level (656 to 984 feet)<sup>11</sup>.

No adverse impacts to migrating bird species are anticipated resulting from the Project, based on the significant distance separating the host Property from the Atlantic Flyway. Potential impacts to migrating bird species possibly using the Housatonic River as a potential flyway are mitigated by the proposed Facility's short (103-foot) height and the fact that it would be unlit and unguyed.

## **Waterfowl Focus Areas**

The Atlantic Coast Joint Venture ("ACJV") is an affiliation of federal, state, regional and local partners working together to address bird conservation planning along the Atlantic Flyway. The ACJV has identified waterfowl focus areas recognizing the most important habitats for

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<sup>6</sup> Stokowski, J.T. 2002. Migratory Bird Stopover Habitat Project Finishes First Year. Connecticut Wildlife, November/December 2002. P.4.

<sup>7</sup> The Silvio O. Conte National Fish & Wildlife Refuge Neotropical Migrant Bird Stopover Habitat Survey <http://www.science.smith.edu/stopoverbirds/index.html>

<sup>8</sup> The Silvio O. Conte National Fish & Wildlife Refuge Neotropical Migrant Bird Stopover Habitat Survey. [http://www.science.smith.edu/stopoverbirds/Chapter5\\_Conclusions&Recommendations.html](http://www.science.smith.edu/stopoverbirds/Chapter5_Conclusions&Recommendations.html)

<sup>9</sup> Manville, A.M. II. 2005. Bird strikes and electrocutions at power lines, communications towers, and wind turbines: state of the art and state of the science - next steps toward mitigation. Bird Conservation Implementation in the Americas: Proceedings 3<sup>rd</sup> International Partners in Flight Conference 2002. C.J. Ralph and T.D. Rich, editors. USDA Forest Service General Technical Report PSW-GTR-191. Pacific Southwest Research Station, Albany CA. pp. 1-51-1064.

<sup>10</sup> Kerlinger, P. 2000. Avian Mortality at Communication Towers: A Review of Recent Literature, Research, and Methodology. Prepared for U.S. Fish and Wildlife Service Office of Migratory Bird Management.

<sup>11</sup> Mabee, T.J., B.A. Cooper, J.H. Plissner, D.P. Young. 2006. Nocturnal bird migration over an Appalachian ridge at a proposed wind power project. Wildlife Society Bulletin 34:682-690.

waterfowl along the Atlantic Flyway. Connecticut contains several of these waterfowl focus areas. The nearest waterfowl focus area to the host Property is the Lower Housatonic River - Great Meadows area, located approximately 1,122 feet to the west. Please refer to the attached Connecticut Waterfowl Focus Areas Map. Potential impacts to migrating waterfowl bird species using the Housatonic River as a flyway are mitigated by the proposed Facility's short (103-foot) height and the fact that it would be unlit and unguyed.

### **CTDEEP Migratory Waterfowl Data**

The Connecticut Department of Energy and Environmental Protection ("CTDEEP") created a Geographic Information System ("GIS") data layer in 1999 identifying concentration areas of migratory waterfowl at specific locations in Connecticut. The intent of this data layer is to assist in the identification of migratory waterfowl resource areas in the event of an oil spill or other condition that might be a threat to waterfowl species. This data layer identifies conditions at a particular point in time and has not been updated since 1999.

No migratory waterfowl areas are located within the Town of Orange. The nearest migratory waterfowl area is located approximately 6 miles to the southeast of the host Property along the Long Island Sound shoreline. The associated species are identified as goldeneye and scaup. Based on its distance to the host Property, no impacts to migratory waterfowl habitat are anticipated to result from development of the proposed Facility.

### **CTDEEP Natural Diversity Data Base**

CTDEEP's Natural Diversity Data Base ("NDDB") program performs hundreds of environmental reviews each year to determine the impact of proposed development projects on state listed species and to help landowners conserve the state's biodiversity. State agencies are required to ensure that any activity authorized, funded or performed by a state agency does not threaten the continued existence of endangered or threatened species. Maps have been developed to serve as a pre-screening tool to help applicants determine if there is a potential impact to state listed species.

The NDDB maps represent approximate locations of endangered, threatened and special concern species and significant natural communities in Connecticut. The locations of species and natural communities depicted on the maps are based on data collected over the years by CTDEEP staff, scientists, conservation groups, and landowners. In some cases an occurrence represents a location derived from literature, museum records and/or specimens. These data are compiled and maintained in the NDDB. The general locations of species and communities are symbolized as shaded areas on the maps. Exact locations have been masked to protect sensitive species from collection and disturbance and to protect landowner's rights whenever species occur on private property.

According to a May 14, 2014 letter from the CTDEEP NDDDB, this agency does not anticipate negative impacts to State-listed species (RCSA Sec. 26-306) resulting from development of the proposed Facility.

### **USFWS Communications Towers Compliance**

The U.S Fish and Wildlife Service (“USFWS”) prepared its *Interim Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers* (September 14, 2000), which recommends the 12 voluntary actions below be implemented in order to mitigate potential bird strikes that could result by the construction of telecommunications towers. APT offers the following responses to each of the USFWS recommendations.

1. *Any company/applicant/licensee proposing to construct a new communications tower should be strongly encouraged to collocate the communications equipment on an existing communications tower or other structure (e.g., billboard, water tower, or building mount). Depending on tower load factors, from 6 to 10 providers may collocate on an existing tower.*

Collocation opportunities on existing towers, buildings or non-tower structures are not available in the area while achieving the required radio frequency (“RF”) coverage objectives of Verizon.

2. *If collocation is not feasible and a new tower or towers are to be constructed, communications service providers should be strongly encouraged to construct towers no more than 199 feet above ground level (AGL), using construction techniques which do not require guy wires (e.g., use a lattice structure, monopole, etc.). Such towers should be unlighted if Federal Administration regulations permit.*

The proposed Facility would consist of a 100-foot monopole structure (with tops of antennas extending to a height of 103 feet AGL), and requires neither guy wires nor lighting.

3. *If constructing multiple towers, providers should consider the cumulative impacts of all of those towers to migratory birds and threatened and endangered species as well as the impacts of each individual tower.*

Multiple towers are not proposed as part of this project.

4. *If at all possible, new towers should be sited within existing “antenna farms” (clusters of towers). Towers should not be sited in or near wetlands, or other known bird concentration areas (e.g., state or Federal refuges, staging areas, rookeries), in known migratory or daily movement flyways, or in habitat of threatened or endangered species. Towers should not be sited in areas with a high incidence of fog, mist, and low ceilings.*

There are no existing “antenna farms” in the area. The proposed Facility is not within wetlands, known bird concentration area, migratory or daily movement flyway, or habitat of threatened/endangered species. According to a May 14, 2014 letter from the CTDEEP NDDDB, this agency does not anticipate negative impacts to State-listed species (RCSA Sec. 26-306) resulting from development of the proposed Facility. The proposed Facility is located generally within an old field/early successional area that is periodically mowed by the property owner as part of the active



agricultural use of the host Property. The proposed Facility and access drive will be in proximity to wetland resources: the proposed entrance of the access road is located approximately 40 feet east of wetlands bordering a stream across Derby Milford Road; and, the proposed Facility's compound area is located approximately 100 feet southeast of a forested wetland system. The proposed Facility will not result in a significant adverse impact to the wildlife habitat function (including avian habitat) being supported by these nearby wetland areas provided appropriate erosion controls are installed and maintained during construction.

In Connecticut, seasonal atmospheric conditions can occasionally produce fog, mist and/or low ceilings. However, high incidences of these meteorological conditions, relative to the region, are not known to exist in the vicinity of the host Property.

5. *If taller (>199 feet AGL) towers requiring lights for aviation safety must be constructed, the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA should be used.*

The total proposed Facility height (103 feet AGL) is less than 199 feet and would not require any aviation safety lighting.

6. *Tower designs using guy wires for support which are proposed to be located in known raptor or waterbird concentration areas or daily movement routes, or in major migratory bird movement routes or stopover sites, should have daytime visual markers on the wires to prevent collisions by these diurnally moving species.*

The proposed Facility would be free-standing and would not require guy wires or visual marking.

7. *Towers and appendant facilities should be sited, designed and constructed so as to avoid or minimize habitat loss within and adjacent to the tower "footprint." However, a larger tower footprint is preferable to the use of guy wires in construction. Road access and fencing should be minimized to reduce or prevent habitat fragmentation and disturbance, and to reduce above ground obstacles to birds in flight.*

The proposed Facility is sited, designed, and would be constructed to accommodate proposed equipment and to allow for future collocations within the smallest footprint possible. No guy wires would be used as the Facility would include a free-standing monopole. The access road and fencing have been designed to be as least intrusive as possible. Portions of the host Property are subject to periodic disturbance through mowing in association with ongoing farming operations that has resulted in various degrees of habitat fragmentation. The proposed development is small-scale (less than 0.5 acre in size) and is comparable to construction of a single family home.

8. *If significant numbers of breeding, feeding, or roosting birds are known to habitually use the proposed tower construction area, relocation to an alternate site should be recommended. If this is not an option, seasonal; restrictions on construction may be advisable in order to avoid disturbance during periods of high bird activity.*

The proposed construction areas are located within portions of the host Property that are subject to regular or periodic disturbance in association with ongoing agricultural activities. Limited tree clearing (5 trees greater than 6 inches diameter at breast height are planned for removal) is associated

with the proposed Facility development as the majority of work is located within an existing hayfield and old field/early successional area; no disturbance to mature forest would occur. Therefore, the proposed development is not anticipated to disturb significant numbers of breeding, feeding, or roosting migratory Neotropical forest dwelling birds. However, grassland bird species may periodically be present within the general development areas which include managed hayfields. Although the grassland habitat on the host Property is considered suboptimal due to its active agricultural use, protective measures are recommended to avoid impact to grassland bird species during construction of the proposed Facility. The following recommendations should be implemented to avoid potential disturbance during periods of high grassland bird activity and provide compliance with the Migratory Bird Treaty Act: 1) if construction activities should occur during the peak nesting period of April 15 through July 15<sup>12</sup>, the area of the proposed access drive through the hayfield will be mowed regularly every two weeks starting April 1<sup>st</sup> until construction begins in order to eliminate suitable grassland habitat in the proposed construction area; or 2), If regular mowing activities are not performed and construction activities are to occur during the peak nesting period, a grassland bird nest survey would be conducted to determine if breeding birds are present and would be disturbed by the proposed development activities. If the avian survey concludes that breeding birds could be disturbed, construction activities would be restricted to avoid the April 15 through July 15 peak nesting period.

9. *In order to reduce the number of towers needed in the future, providers should be encouraged to design new towers structurally and electrically to accommodate the applicant/licensee's antennas and comparable antennas for at least two additional users (minimum of three users for each tower structure), unless this design would require the addition of lights or guy wires to an otherwise unlighted and/or unguyed tower.*

The proposed Facility has been designed in accordance with this guidance, as it could accommodate a total of four antenna platform positions and the Town's emergency communications system antennas, if required. The proposed, free-standing Facility would be neither lighted nor guyed.

10. *Security lighting for on-ground facilities and equipment should be down-shielded to keep light within the boundaries of the site.*

Security lighting for on-ground facilities would be down-shielded using Dark Sky compliant fixtures set on motion sensor with timer.

11. *If a tower is constructed or proposed for construction, Service personnel or researchers from the Communication Tower Working Group should be allowed access to the site to evaluate bird use, conduct, dead-bird searches, to place net catchments below the towers but above the ground, and to place radar, Global Positioning System, infrared, thermal imagery, and acoustical monitoring equipment as necessary to assess and verify bird movements and to gain information on the impacts of various tower sizes, configurations, and lighting systems.*

With prior notification to Verizon, USFWS personnel would be allowed access to the proposed Facility to conduct evaluations.

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<sup>12</sup> USFWS identifies the peak avian nesting season as April 15 through July 15 and recommends clearing activities be performed before this period in order to comply with the Migratory Bird Treaty Act, personal communication with Maria Tur, USFWS New England Field Office, February 27, 2014.

*12. Towers no longer in use or determined to be obsolete should be removed within 12 months of cessation of use.*

If the proposed Facility was no longer in use or determined to be obsolete, it would be removed within 12 months of cessation of use.

## **Summary and Conclusions**

In response to the council's inquiries with respect to avian-related concerns, APT has determined through this desk-top evaluation that the proposed Facility is not proximate to an Important Bird Area or other significant avian resource areas. In addition, the proposed Facility would comply with the USFWS guidelines for minimizing the potential to adversely impact birds. As a result, no migratory bird species are anticipated to be impacted by Verizon's proposed development provided the recommendations contained in this evaluation (Item 8, above) are adhered to.

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# Figures

- Avian Resources Map
- Connecticut Waterfowl Focus Areas Map

# Avian Resources Map

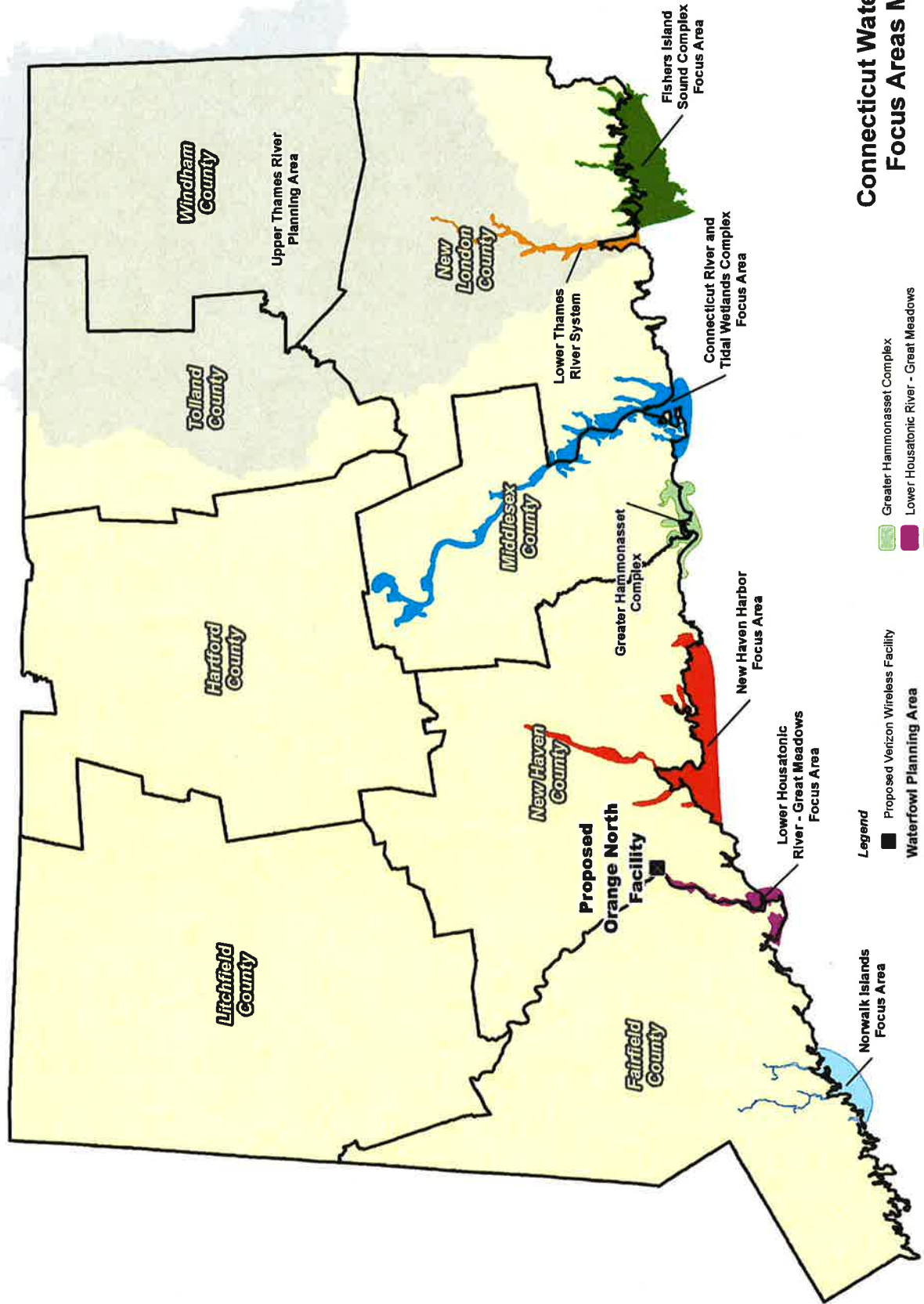
Proposed Wireless  
Telecommunications Facility  
Orange North  
831 Derby Milford Road  
Orange, Connecticut

## Legend

- Proposed Facility
- Bald Eagle Site\*
- Hawk Watch Site
- Important Bird Site\*
- Important Bird Area\*
- Breeding Bird Survey Route
- Natural Diversity Database (CTDEEP, 6/2014)
- Critical Habitat (CTDEEP, 07/2009)
- Migratory Waterfowl (CTDEEP, 1999)\*
- Preserved Open Space (CTDEEP, 1997)
- Federal Open Space (CTDEEP, 2004)\*
- CT DEP Property (CT DEEP, 12/2010)
- State Forest
- State Park
- DEP Owned Waterbody\*
- State Park Scenic Reserve\*
- Historic Preserve\*
- Natural Area Preserve\*
- Fish Hatchery\*
- Flood Control
- State Park Trail\*
- Water Access\*
- Wildlife Area
- Wildlife Sanctuary\*
- Other
- Open Water
- Town Boundary

\*Where within mapped extent

Avian Source Information:  
Bald Eagle Sites: U.S. Geological Survey, National Biological Service, 1988, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 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# Connecticut Waterfowl Focus Areas Map

Proposed Wireless  
Telecommunications Facility  
Orange North  
831 Derby Milford Road  
Orange, Connecticut

- Legend**
- Proposed Verizon Wireless Facility
  - Waterfowl Planning Area
  - Waterfowl Focus Areas
  - Greater Hammonasset Complex
  - Lower Housatonic River - Great Meadows
  - Lower Thames River System
  - New Haven Harbor
  - Norwalk Islands
  - Connecticut River and Tidal Wetlands Complex
  - Fishers Island Sound Complex

