STATE OF CONNECTICUT CONNECTICUT SITING COUNCIL

IN RE:

APPLICATION OF CELLCO PARTNERSHIP : DOCKET NO. 472

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

541 BROADBRIDGE ROAD IN

BRIDGEPORT, CONNECTICUT : MAY 23, 2017

RESPONSES OF CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS TO CONNECTICUT SITING COUNCIL PRE-HEARING QUESTIONS, SET ONE

On May 9, 2017, the Connecticut Siting Council ("Council") issued Pre-Hearing Questions, Set One to Cellco Partnership d/b/a Verizon Wireless ("Cellco"), relating to Docket No. 472. Below are Cellco's responses.

Question No. 1

Referencing page 11 of Cellco Partnership d/b/a Verizon Wireless' (Cellco) Application, was the search ring first established in June 2011? What was the approximate radius of Cellco's search ring for this area? Provide the approximate longitude and latitude coordinates of the center of the search ring for this area. Why was the search ring process put on hold for approximately three years? Was the re-activated search ring in 2014 the same as the one from 2011?

Response

The original search ring was issued in 2011 as a 3G CDMA/EVDO capacity search ring.

The project was initially put on hold because it was a lower priority site. Shortly thereafter,

Cellco stopped funding any new projects for the old 3G CDMA service, putting the site on-hold indefinitely. The search ring was revived in July of 2014 as an LTE capacity offload site because the surrounding LTE sectors are exhausting.

The original 2011 - CDMA search ring was centered on the location of the proposed Bridgeport NE Facility. When Cellco revived the search ring in 2014, the search ring moved closer to Route 8, near property located at 1235 Huntington Turnpike (41.224587 latitude and 73.168772 longitude). This search ring had a radius of approximately 0.25 miles. The sites evaluated closer to Route 8 include Site No. 4 – 7 in the Site Search Summary included behind Tab 8 of the Application. After no alternative cell sites were identified in this area Cellco returned to the property at 541 Broadbridge Road.

Question No. 2

Of the letters sent to abutting property owners, how many certified mail receipts were received? If any receipts were not returned, which owners did not receive their notice? Were any additional attempts made to contact those property owners, e.g. via First Class Mail?

Response

Cellco received 10 of 12 certified mail receipts back from abutting landowners. Receipts were not received from Bernice Alicea and Levit Rivera at 602 Broadbridge Road and 1055 Huntington Turnpike LLC, the owner of property at 1055 Huntington Turnpike. On May 11, 2017, notice letters were resent to each by regular mail. On May 18, 2017, Cellco received an email from 1055 Huntington Turnpike LLC stating that they did not object to the tower proposal. On May 23, 2017, the original notice to Bernice Alicea and Levit Rivera was returned, marked "unclaimed".

Explain why the northeastern corner of the subject property was selected for the proposed facility in light of the abutting residential properties to the north and northeast. Could the facility be located on a different location on the subject property? Did Cellco consider a rooftop facility?

Response

The location of Cellco facility was chosen so that the proposed flagpole and ground-mounted equipment would be located in an under-utilized portion of the property. The facility could be located in a different location on the subject property as long as the location did not affect the parking and servicing of the shopping plaza and was approved by the land owner. Cellco did not consider a roof top facility due to the existing structures inability to support what would be an 87'-3" flagpole tower. Major structural modifications to the building would be required to install a roof-top facility.

Question No. 4

Under Tab 8 of the Application, Cellco noted the site alternatives it investigated.

Describe the process that Cellco utilizes to investigate such sites. How did Cellco determine "No landlord interest" for seven of these sites?

Response

When a possible candidate is identified and approved by Cellco's RF Design Engineer, Cellco's real estate consultants send a certified letter to the individual property owners. The owners are asked if they are interested in locating a tower on their property. If the owners do not respond, Cellco assumes that they were not interested.

Has Cellco considered other tower designs such as a monopole or other stealth tower designs such as a sign? Explain.

Response

No. Given the site's proximity to area residences, Cellco thought a flagpole-type design would be the least visually intrusive of all of the stealth design options.

Question No. 6

Would the tower be designed with a yield point to ensure that the tower setback radius remains within the boundaries of the subject property?

Response

Yes, the tower could be designed with a yield point so that, in the unlikely event of a tower failure, the structure would remain on the subject parcel.

Question No. 7

What is the tower design wind speed for this area (Fairfield County)?

Response

110 MPH (Basic Wind Speed)

Question No. 8

What color would the tower finish be, e.g. white, galvanized steel gray, etc.?

Response

As currently proposed, the tower finish would be white. Cellco would be willing to consider alternative colors for the structure.

Question No. 9

Would the proposed flagpole tower have a flag? If no, explain why not.

Response

Cellco does not intend to fly a flag at this site. Cellco's primary concern relates to the lighting protocol and the going maintenance obligations associated with flying a flag.

Question No. 10

What measures are proposed for the site to ensure security and deter vandalism, e.g. alarms, gates, locks, etc.?

Response

The tower and related equipment would be surrounded by an eight-foot security fence with privacy slats. The top of the fence would maintain a foot of barbed-wire for additional security. Cellco's radio equipment cabinets are equipped with silent intrusion alarms. If someone attempts to tamper with or break-in to the cabinets, cell site technicians monitoring the site will be alerted and local police will be contacted.

Question No. 11

While the proposed compound fence would have two-inch mesh, would the proposed privacy slats function as both a visual barrier and an anti-climbing feature?

Response

Yes.

Question No. 12

Would any blasting be required to develop the site?

Response

Cellco does not anticipate the need for blasting to construct this facility. That said, if the facility is approved, a complete geotechnical survey will be prepared and subsurface conditions will be evaluated.

Would the proposed facility support text-to-911 service? Would any additional equipment be required for this purpose?

Response

Yes, the proposed Bridgeport NE Facility will support text-to-911 as soon as the Public Safety Answering Point (PSAP) is capable of receiving text-to-911. No additional cell site equipment is necessary to support this service.

Question No. 14

Is Cellco aware of any Public Safety Answering Points in the area of the proposed site that are able to accept text-to-911?

Response

Cellco is not aware of any Public Safety Answering Points in the area of the proposed Bridgeport NE cell site that are about to accept text-to-911 at this time.

Question No. 15

Of the adjacent existing sites identified on page 8 of the Application, which of these sites would the proposed facility interact with to hand off signals? Provide the structures heights, antenna centerline heights, and tower types (e.g. monopole) for these facilities.

Response

The Bridgeport NE Facility would interact with each of the existing Cellco facilities listed below.

<u>Site</u>	Structure (Type)	Structure Height (AGL)	Cellco Antenna <u>Height (AGL)</u>
North Bridgeport 2	Roof-Top	100'	125'
Trumbull 4	Transmission Line Lattice Tower	154'	90'
Trumbull II	Roof-Top (Marriott)	58'	64'
Stratford West	Tower (Monopole)	100'	77'

Would Cellco initially provide service for all four frequency bands (i.e. 700 MHz, 850 MHz, 1900 MHz, and 2100 MHz) at the proposed facility, or would it deploy certain frequency bands initially and others in the future? Explain.

Response

Cellco will initially deploy its 700 MHz and 2100 MHz frequencies at the Bridgeport NE Facility. Based on the amount of wireless "traffic" that we are looking to offload from the sectors of Cellco's adjacent sites, it was determined that the operation of these two (2) operating frequencies would be adequate at this time.

Question No. 17

Are all frequencies used to transmit voice and data?

Response

Cellco uses all of its licensed frequencies to transmit voice and data services.

Question No. 18

What is the signal strength for which Cellco designs its system? For in-vehicle coverage? For in-building coverage?

Response

Cellco's minimum design threshold for CDMA signal strength is -85 dBm Receive Signal Strength Indicator (RSSI) for in-vehicle service and -75 dBm RSSI for in-building service. For LTE signal strength, Cellco's minimum design threshold is 114 dB Reverse Link Operational Path Loss (RLOPL) for in-vehicle service and 95 dB RLOPL for in-building service.

Question No. 19

What is the existing signal strength within the area Cellco is seeking to cover from this site?

Response

Cellco's signal strength in the area around the proposed Bridgeport NE Facility ranges between -90 dBm and -115 dBm at 700 MHz, and -96 dBm and -122 dBm at 2100 MHz.

Cellco's LTE signal strength in the area is between 98 dB and 138 dB RLOPL at 700 MHz, and 114 dB and 142 dB RLOPL at 2100 MHz.

Question No. 20

Does Cellco have any statistics on dropped calls and/or ineffective attempts in the vicinity of the proposed facility? If so, what do they indicate? Does Cellco have any other indicators of substandard service in this area?

Response

There are numerous parameters that Cellco considers in its effort to improve network performance. The most critical parameters are the Voice Over LTE (VoLTE) Ineffective Attempts (IA) and VoLTE Dropped Calls (DC). The table below includes the relevant DC and IA data for the month of April 2017 (excluding weekends and any maintenance windows).

Facility Name	Sector	Carrier	Ineffective Attempts % (IA)	Dropped Calls % (DC)	
Trumbull II CT	Gamma	700 MHz	0.49	1,61	
North Bridgeport 2 CT	Alpha	700 MHz	1.22	2.01	
North Bridgeport 2 CT	Beta	700 MHz	0.46	1.09	
Stratford West CT	Alpha	700 MHz	0.54	1.04	
Trumbull 4 CT	Beta	700 MHz	0.88	0.79	

Cellco's system performance standard is 0.75% or better for DC and IA. For LTE voice services, none of the surrounding cell sites satisfy Cellco's DC performance standard. Three of the five surrounding sites currently satisfy Cellco's IA performance standard.

Question No. 21

The Executive Summary of the Application notes that Cellco's North Bridgeport 2 and Trumbull II cell sites are currently operating at or near their capacity limits. Please include a projected exhaustion dates for both of these sites. Would the deployment of the proposed facility be sufficient to address these capacity concerns, or would an additional facility be required in the near term to off-load traffic?

Response

Due to current networks demands in the area the North Bridgeport 2 site is projected to exhaust in November of 2017. The Trumbull II site is has been in exhaust since March of 2017. Cellco expects that the network relief from the proposed Bridgeport NE Facility would be sufficient for approximately 3 to 5 years. This estimate is very dependent upon customer demand in the area, which can vary, day-to-day or month-to-month depending on several factors, including, but not limited to, local activities, highway traffic, and network promotions and services like the introduction of unlimited data plans.

Are 92 feet and 82 feet above ground level (agl) the minimum heights at which Cellco's antennas could achieve its coverage objectives?

Response

Yes, 92 feet and 82 feet AGL are the minimum heights that Cellco needs in order for it to achieve its wireless service objectives in the area.

Question No. 23

Similar to the propagation maps provided in the Application, submit propagation maps for all four frequency bands (i.e. 700 MHz, 850 MHz, 1900 MHz, and 2100 MHz) assuming that the tower is ten feet shorter than proposed (i.e. antennas are installed at centerline heights of 82 feet and 72 feet agl).

Response

The propagation maps requested are included in <u>Attachment 1</u>.

Question No. 24

On page 8 of the Application, Cellco provided the proposed coverage distances for Route 8, Huntington Turnpike and Broadbridge Road. Provide the individual coverage gaps for these three roads based on each of the four frequency bands (i.e. 700 MHz, 850 MHz, 1900 MHz, and 2100 MHz).

Response

The actual "coverage gaps" along area roadways in the north Bridgeport area are very small and in some cases non-existent. See the table below.

	Coverage Gap			
	700 MHz	850 MHz	1900 MHz	2100 MHz
Route-8	0	0	0	0
Huntington Turnpike	0	0	0.3 miles	0.3 miles
Broadbridge Road	0.2 miles	0	0	0

Provide the sum of the coverage gaps for all secondary roads (i.e. other than Route 8, Huntington Turnpike, and Broadbridge Road) that the proposed facility would cover based each of the four frequency bands (i.e. 700 MHz, 850 MHz, 1900 MHz, and 2100 MHz).

Response

Secondary Road	Coverage Gap				
	700 MHz	850 MHz	1900 MHz	2100 MHz	
Silver Lane	0.1 miles	0.1 miles	0.2 miles	0.2 miles	
Woodmere Road	0.1 miles	0.0 miles	0.2 miles	0.2 miles	
Ruby Lane	0.1 miles	0.0 miles	0.2 miles	0.2 miles	
Gem Street	0.1 miles	0.0 miles	0.2 miles	0.2 miles	
Cannon Drive/Sorghum Terrace	0.4 miles	0.2 miles	0.4 miles	0.4 miles	

Question No. 26

Provide the proposed sum of coverage distances for all secondary roads (i.e. other than Route 8, Huntington Turnpike, and Broadbridge Road) that the proposed facility would cover based on 700 MHz, 850 MHz, 1900 MHz, and 2100 MHz at the proposed antenna heights.

Provide similar data assuming that the tower is ten feet shorter in height.

Response

See the table provided in response to Q. 25 above. There would be no change in sum of coverage distances from the proposed Bridgeport NE Facility along secondary roads if the tower

were 10 feet shorter and Cellco 's antennas were located at the 82-foot and 72-foot levels.

Question No. 27

On page 8 of the Application, Cellco provided the proposed coverage areas based on the four frequency bands (i.e. 700 MHz, 850 MHz, 1900 MHz, and 2100 MHz). Provide these coverage areas assuming that the tower is ten feet shorter in height.

Response

If the proposed Bridgeport NE tower were ten feet shorter (Cellco antennas at the 82 and 72-foot levels), it would provide reliable wireless service to a 0.7 mile portion of Route 8; a 0.8 mile portion of Huntington Turnpike; a 1.1 mile portion of Broadbridge Road, and an overall area of 4.03 square miles at 700 MHz frequencies; a 0.5 mile portion of Route 8; a 0.6 mile portion of Huntington Turnpike; a 0.8 mile portion of Broadbridge Road, and an overall area of 1.99 square miles at 850 MHz frequencies; a 0.4 mile portion of Route 8; a 0.4 mile portion of Huntington Turnpike; a 0.7 mile portion of Broadbridge Road, and an overall area of 1.38 square miles at 1900 MHz frequencies; and a 0.4 mile portion of Route 8; a 0.7 mile portion of Huntington Turnpike; a 0.8 mile portion of Broadbridge Road, and an overall area of 1.87 square miles at 2100 MHz frequencies.

Question No. 28

Provide an estimate of the residential population living within the area that would be covered from the proposed facility.

Response

Estimated residential population (Pops) covered from the proposed Bridgeport NE Facility is 10,846 Pops at 700 MHz, 8,866 Pops at 850 MHz, 5,274 Pops at 1900 MHz, and 7,035 Pops at 2100 MHz.

Provide an estimated traffic count for those portions of Route 8, Huntington Turnpike and Broadbridge Road that would be covered from the proposed facility.

Response

According to Connecticut Department of Transportation information, there are 88,300 average daily trips (ADTs) along Route 8 near its intersection with Chopsy Hill Road; 7,500 ADTs along Broadbridge Road; and 6,500 ADTs along Huntington Turnpike.

Question No. 30

Could the required coverage and capacity upgrade needs be met by a series of small cell facilities or a distributed antenna system instead of the proposed macro tower facility? If small cells are feasible, approximately how many would be required, assuming optimum placement?

Response

It may be possible that a series of small cell installations on existing utility poles could help improve wireless service in the residential areas around the proposed Bridgeport NE Facility. No such utility poles exist, however, along those portions of Route 8 that would be served by the proposed Bridgeport NE Facility.

The actual number of small cell facilities that would be needed to provide a service comparable to that from the proposed Bridgeport NE Facility is not known but would be significant given the overall size of the area that Cellco is attempting to serve.

Ouestion No. 31

Barring a mechanical breakdown or necessary shut-down for required maintenance, in the event of a commercial power outage, would the natural gas-fueled generator have essentially an unlimited run time because the fuel is pipeline supplied?

Response

Yes, provided natural gas supply to the Property is not interrupted for some reason.

Question No. 32

Page 7 of the Application states, "The back-up generator would be used to recharge the batteries." If the generator failed to start, about how long could the batteries alone supply power to Cellco's proposed telecommunication facility?

Response

The back-up batteries could supply power to the facility for 4 to 8 hours depending upon site loading. If site traffic increases significantly, battery life could be limited to as little as two (2) hours. This is why a permanent back-up power supply is so critical to the system.

Question No. 33

In the event of a commercial power outage, would the battery backup system provide uninterrupted power and thus prevent a "reboot" condition?

Response

Yes.

Question No. 34

Is the proposed backup generator sized for Cellco's needs only? If yes, is Cellco amenable to reserving space for a future larger shared generator in the event that another wireless carrier or municipality co-locates on the proposed tower?

Response

Yes. Due to the limited ground space available at this site, a generator, large enough to provide back-up power to multiple carriers would not fit within the limits of the existing compound and leased area.

Would the backup generator run periodically for maintenance purposes, e.g. twenty minutes per week? If yes, could this be scheduled during daytime hours rather than nighttime hours?

Response

Yes. Generators are typically exercised once a week for about 20 minutes and always during the daytime hours.

Question No. 36

Would the backup generator have containment measures to protect against oil or coolant leakage? For example, would it have a double-walled fuel tank and a recessed floor under the engine compartment?

Response

As a natural-gas generator, the generator unit does not maintain a fuel tank. The generator does, however, maintain secondary containment for engine oil and coolant within the generators weather enclosure.

Question No. 37

Identify the safety standards and/or codes by which equipment, machinery, or technology would be used or operated at the proposed facility.

Response

- 2012 International Building Code with the 2016 CT Building Code Amendments
- National Electric Code (NFPA70)
- 2005 CT State Fire Safety Code with the 2009 Amendments

- TIA-222-G-1 "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures".
- Occupational Safety and Health Administration (OSHA).

Is the only State-designated Scenic Road within the 2-mile viewshed area the Merritt Parkway (Route 15)? Are there any locally-designated scenic roads within the viewshed area? Response

Yes, the Merritt Parkway is the lone State-designated Scenic Road within the study area of the viewshed report. To the best of our knowledge, there are no locally-designated scenic roads with this area

Question No. 39

Is the proposed site near an "Important Bird Area" as designated by the National Audubon Society? Where is the nearest IBA (i.e. distance and direction from the proposed facility)? Would the proposed project adversely impact the nearest IBA?

Response

The closest Important Bird Area ("IBA") to the site is the Milford Point/Wheeler Marsh/Mouth of the Housatonic River in Milford and Stratford located approximately 3.25 miles southeast of the proposed site. This IBA is dominated by Wheeler Marsh, consisting of a ±615 acre Spartina alterniflora-dominated low salt marsh at the mouth of the Housatonic River, and is a wildlife management area managed by the State of Connecticut Department of Energy and Environmental Protection for waterfowl and marsh bird hunting and the benefit of other wildlife. Due to the significant distance separating the proposed facility from this IBA, no adverse impact to this resource or the bird species it supports are anticipated by the proposed development.

Please see the Avian Resources Map provided as <u>Attachment 2</u> for additional information.

Question No. 40

Would Cellco's proposed facility comply with recommended guidelines of the United States Fish and Wildlife Service for minimizing the potential for telecommunications towers to impact bird species?

Response

In 2013, the USFWS prepared its *Revised Voluntary Guidelines for communication*Tower Design, Siting, Construction, Operation, Retrofitting, and Decommissioning (Manville 2013). These voluntary guidelines were developed to assist tower companies in developing their communication systems in a way which minimizes the risk to migratory birds and threatened and endangered species. The proposed facility would consist of a 100-foot monopole structure which requires neither guy wires nor lighting and is therefore consistent with USFWS' environmentally preferred "gold standard" (towers that are unlit, unguyed, monopole or lattice, and less than 200 feet above ground level), thereby complying with these guidelines to reduce impacts to migratory birds.

Question No. 41

Referencing the "Preliminary Historic Resources Determination" under Tab 12 of the Application, to date, has Cellco submitted the applicable historic documentation to the State Historic Preservation Office (SHPO)? If yes, provide a copy of SHPO's response if it is available.

Response

Cellco submitted a request to the SHPO (including the information under Tab 12) on May 12, 2017 and has not yet received a response. A copy of SHPO's response will be provided to the Council upon receipt.

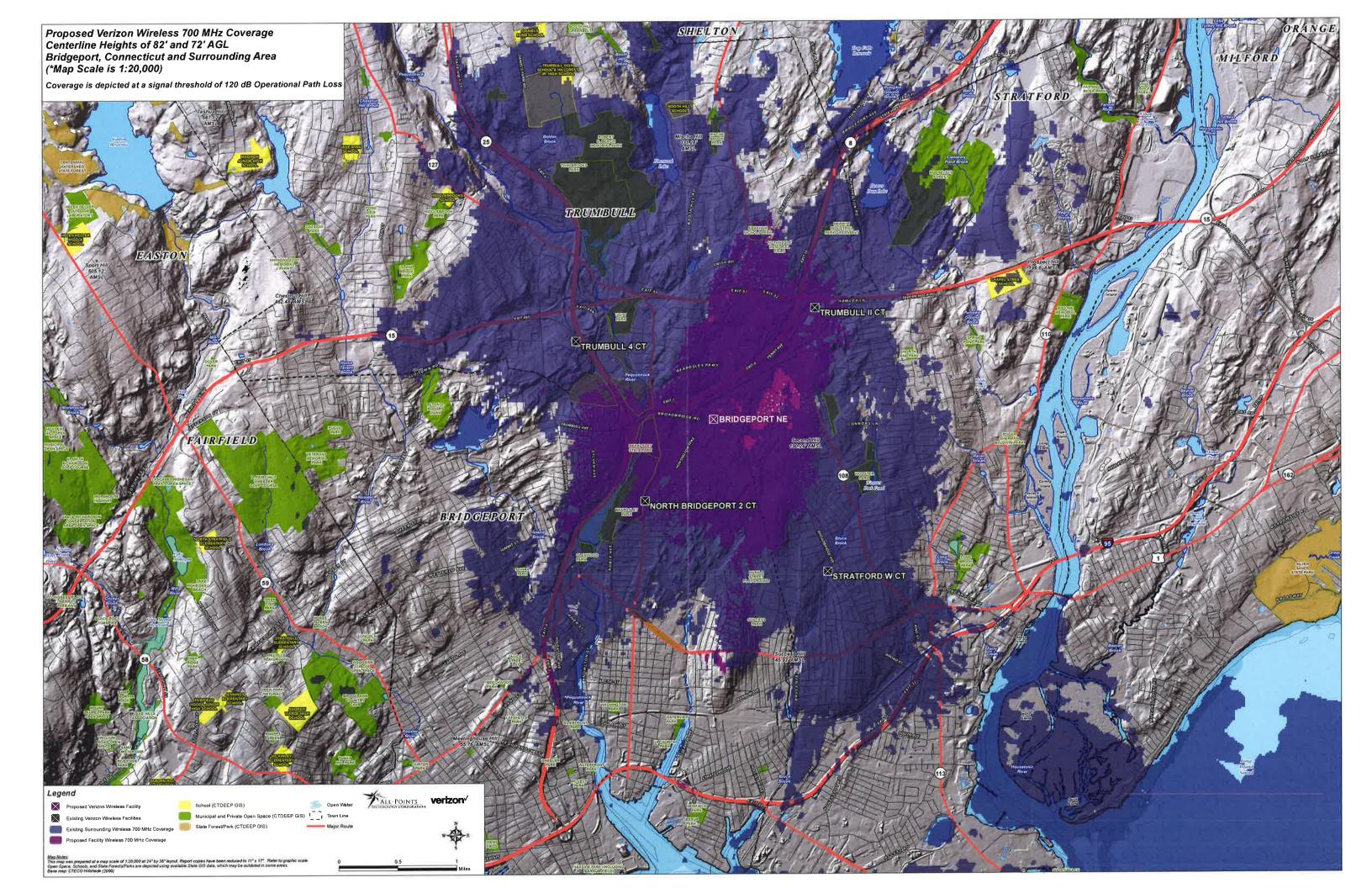
Question No. 42

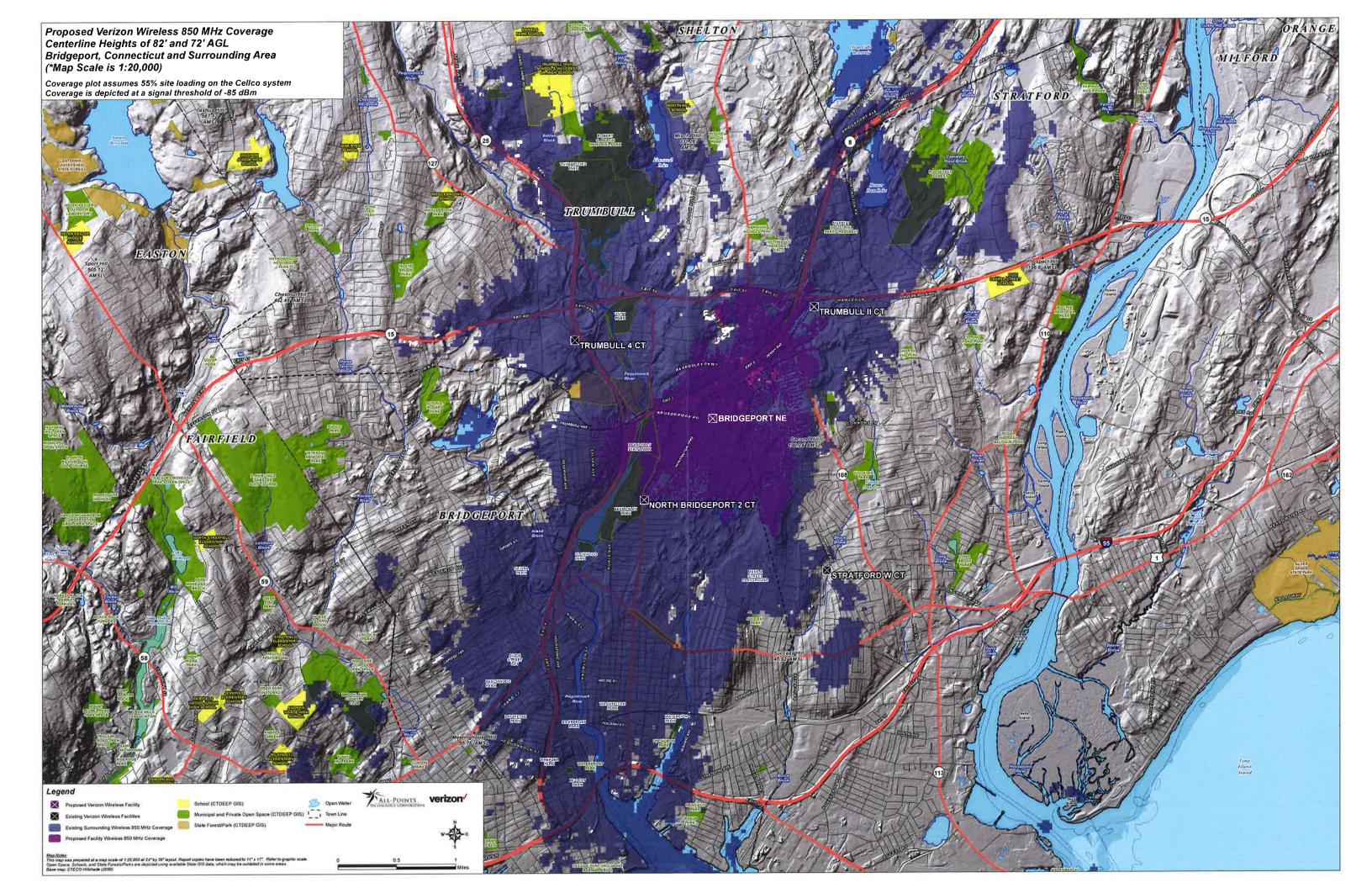
Referencing the "Preliminary USFWS & CTDEEP Compliance Determination" under Tab 10 of the Application, to date, has Cellco received a response from the Connecticut Department of Energy and Environmental Protection (DEEP) regarding the Natural Diversity Database? If yes, provide a copy of such DEEP response.

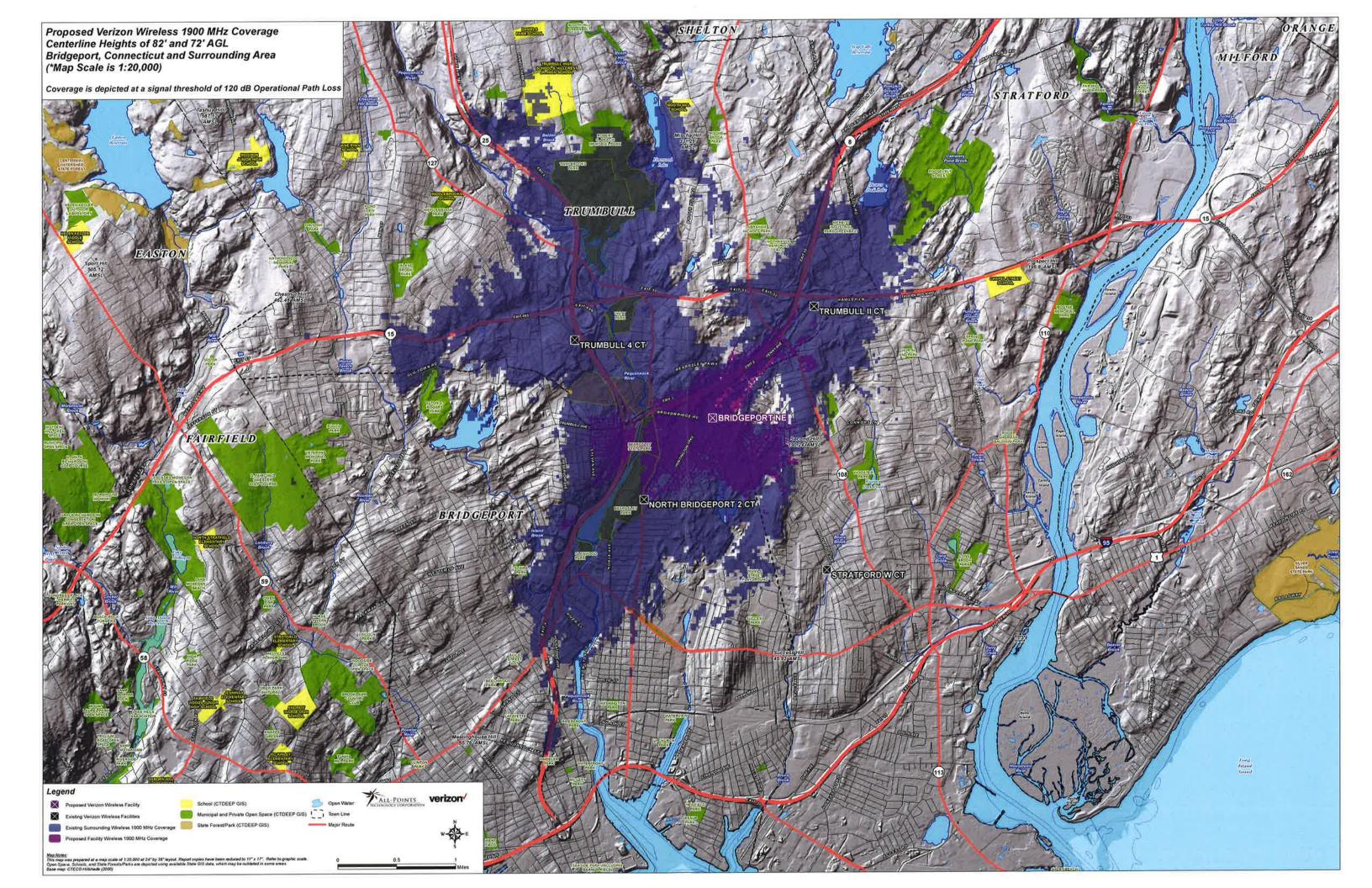
Response

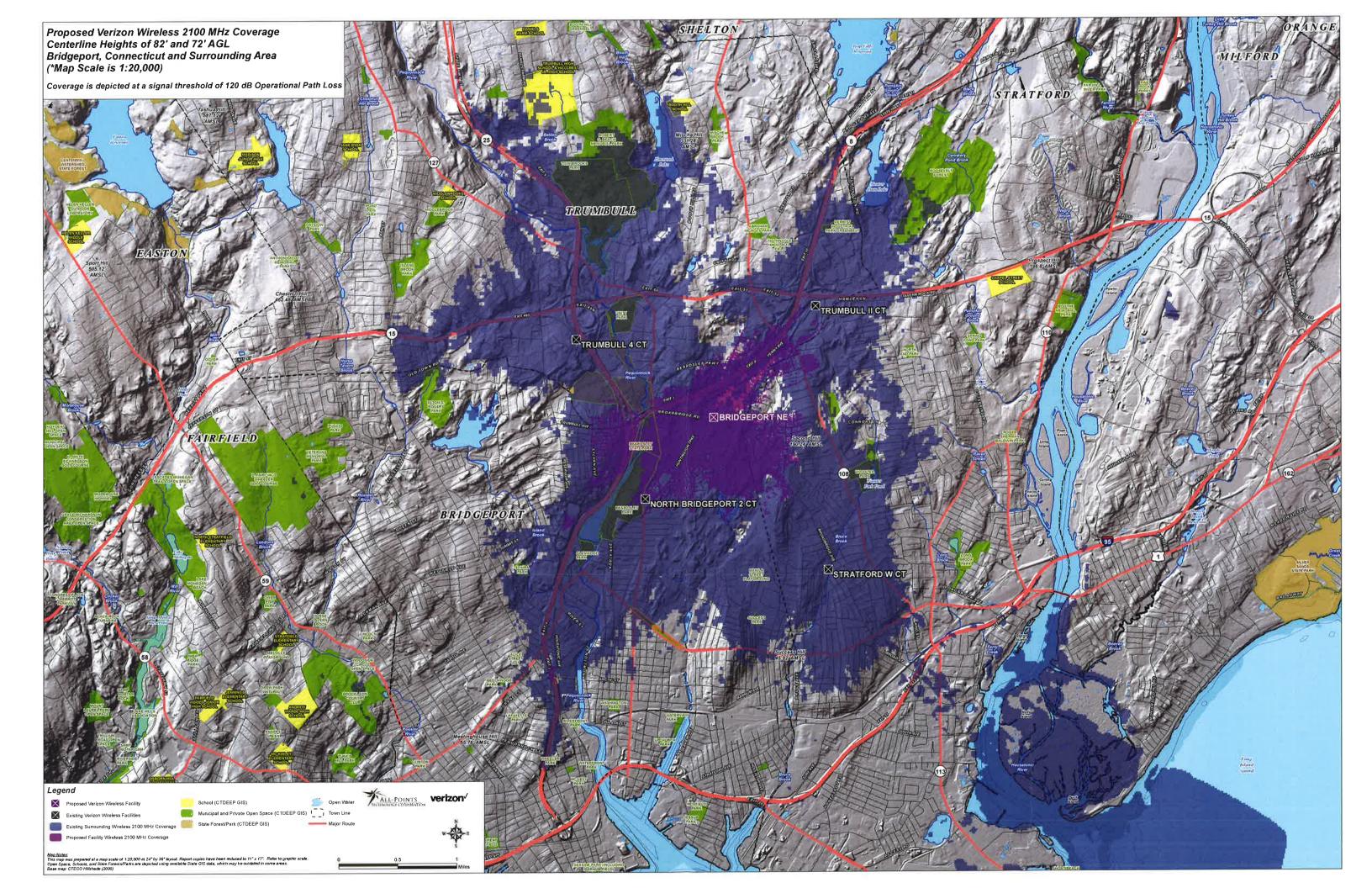
A response was received from the Natural Diversity Database ("NDDB") on May 12, 2017 indicating that they "do not anticipate negative impacts to State-listed species (RCSA Sec. 26-306) resulting from your proposed activity at the site based upon the information contained within the NDDB." A copy of the NDDB letter is provided in <u>Attachment 3</u>.

ATTACHMENT 1

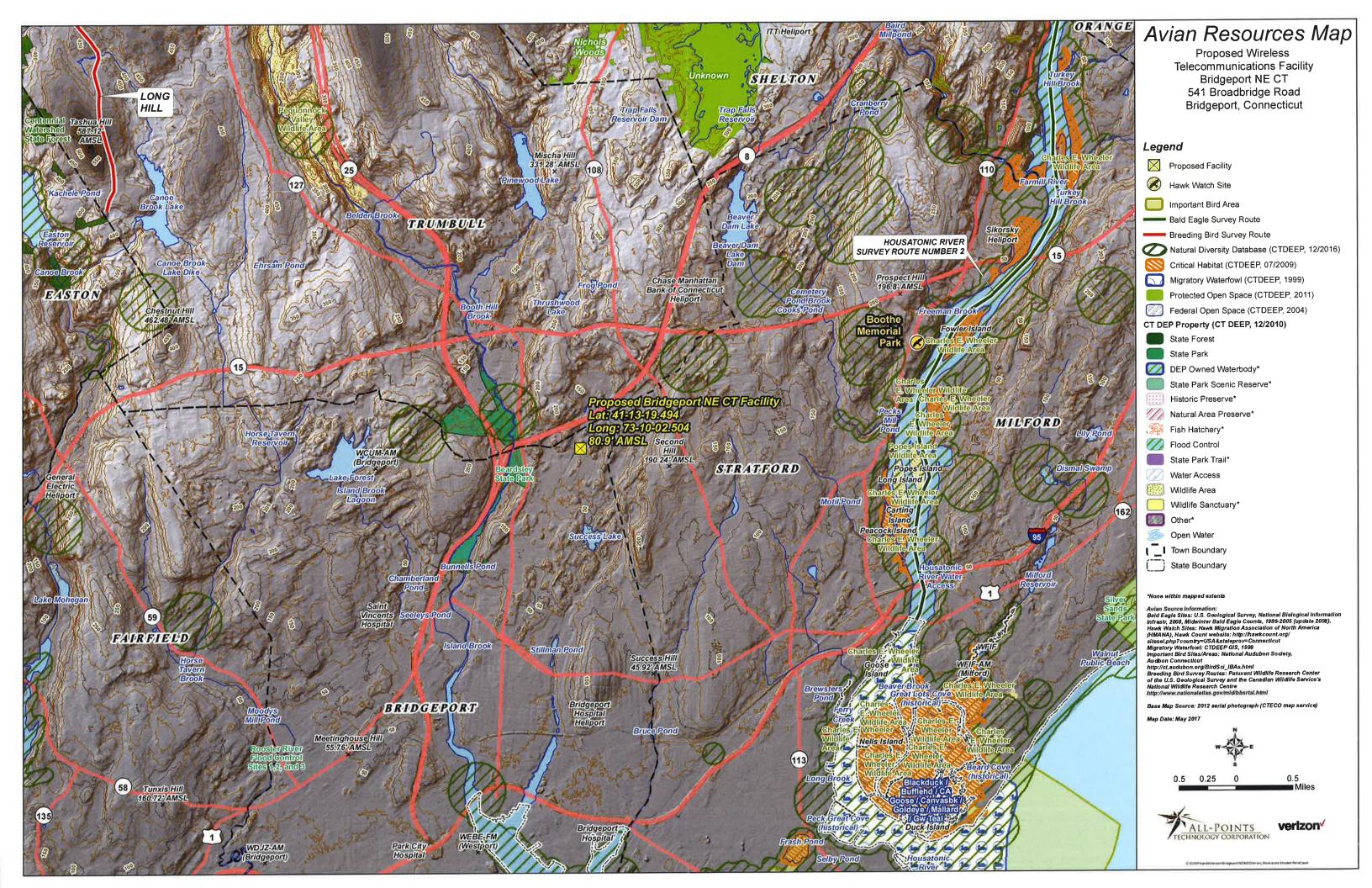








ATTACHMENT 2



ATTACHMENT 3



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Affirmative Action/Equal Opportunity Employer

May 12, 2017

Dean Gustafson All-Points Technology Corporation, P.C. 30 Bogg Ln Lebanon, CT 06249 dgustafson@allpointstech.com

Project: Cellular Communications Tower Installation and Maintenance for Bridgeport NE Located at 541

Broadbridge Road in Bridgeport

NDDB Determination No.: 201703658

Dear Dean Gustafson,

I have reviewed Natural Diversity Data Base (NDDB) maps and files regarding the area delineated on the map provided for the proposed Cellular Communications Tower Installation and Maintenance for Bridgeport NE Located at 541 Broadbridge Road in Bridgeport, Connecticut. I do not anticipate negative impacts to State-listed species (RCSA Sec. 26-306) resulting from your proposed activity at the site based upon the information contained within the NDDB. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits. This determination is good for two years. Please re-submit a new NDDB Request for Review if the scope of work changes or if work has not begun on this project by May 12, 2019.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available.

Please contact me if you have further questions at (860) 424-3592, or dawn.mckay@ct.gov. Thank you for consulting the Natural Diversity Data Base.

Sincerely,

Dawn M. McKay

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Environmental Analyst 3