STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
APPLICATION OF CELLCO PARTNERSHIP 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 631 ORANGE AVENUE, MILFORD, CONNECTICUT	:	DOCKET NO. 372
	:	JANUARY 27, 2009

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

On January 9, 2009, the Connecticut Siting Council ("Council") issued Pre-Hearing Interrogatories to the Applicant, Cellco Partnership d/b/a Verizon Wireless ("Cellco"), relating to the above-captioned docket. Below are Cellco's responses.

Question No. 1

What frequencies is Cellco licensed to use in the Milford Area?

Response

In the Milford area, Cellco is licensed to operate in the cellular (869-880, 890 – 891.5 MHz), PCS (1970 – 1980 MHz) and recently acquired radio spectrum in the 700 MHz (746 – 757 MHz) frequency range. Cellco plans to utilize all licensed frequencies at the proposed Milford East Facility.

Question No. 2

Would Cellco's antennas be compliant with E911 requirements?

Response

Yes. To be E-911 compliant, the Cellco facility must be equipped to provide services generally described in the Wireless Communications and Public Safety Act of 1999 and the Enhanced 911 Act in 2004. These services are designed to promote citizen activated emergency response capabilities; upgrades to Public Safety Answering Point ("PSAP") capabilities; and related functions in receiving Enhanced-911 ("E-911") calls.

The FCC has divided the implementation of the E-911 program into two parts. Under Phase 1, carriers had to provide a local PSAP with the telephone number of the originator of a 911 call and the location of the cell site or base station transmitting the call. Under Phase 2, carriers had to begin to provide PSAP's with more precise information including the latitude and longitude of the caller. The FCC requires the technology used for E-911 services to meet certain accuracy standards, the development of new technologies to support E-911 services, as well as coordination among public safety agencies, wireless carriers, technology vendors, equipment manufacturers and wireline carriers. The proposed Milford East Facility will be capable of providing both Phase 1 and Phase 2 services from the time the facility is activated.

Question No. 3

Has Cellco received any comments regarding the proposed facility from any of the City of Milford's boards or commissions?

Response

No. Cellco did, however, at its local input meeting with municipal officials offer to meet with any local board or commissions interested in hearing more about the proposed tower site and/or the Siting Council review process.

Question No. 4

Has the City of Milford expressed any interest in placing antennas on this facility?

Response

No. Cellco did, however, offer the City space on the tower if a need exists. As always, this space would be provided rent free.

Question No. 5

When was Cellco's search ring for this area first issued?

Response

The Milford East search ring was initiated on September 18, 2006.

Question No. 6

Identify adjacent sites with which the proposed site would hand off signals.

Response

The proposed Milford East Facility would interact with Cellco's existing Milford NE cell site, located approximately 1.9 miles to the west; existing Forest Heights cell site, approximately 1.2 miles to the south; Milford South 2 cell site, approximately 1.6 miles to the southeast; Old Gate cell site, approximately 1.47 miles to the south; Orange 4 cell site, approximately 1.6 miles to the east; Orange 1 cell site, approximately 2.14 miles to the northeast; and Orange 4 cell site, approximately 2.46 miles to the north.

Question No. 7

Provide the following information for Cellco antennas: number of channels per sector for each antenna system that would be installed on the proposed tower, ERP per channel for each antenna system, and frequency at which each antenna system would operate.

Response

PCS Antennas

Alpha Sector – 110 ft.	**Beta Sector – 110 ft.**	**Gamma Sector – 110 ft.**
Antenna Type: LPA – 185063/8CF	Antenna Type: LPA – 185063/8CF	Antenna Type: LPA – 185063/8CF
Frequency: Tx: 1970-1980 MHz; Rx: 1890-1900 MHz	Frequency: Tx: 1970-1980 MHz; Rx: 1890-1900 MHz	Frequency: Tx: 1970-1980 MHz; Rx: 1890-1900 MHz
No. Channels: 7	No. Channels: 7	No. Channels: 7
ERP/Channel: 354 W Max	ERP/Channel: 354 W Max	ERP/Channel: 354 W Max

Cellular Antennas

Alpha Sector – 110 ft.	**Beta Sector – 110 ft.**	**Gamma Sector – 110 ft.**
Antenna Type: LPA – 80063/4CF	Antenna Type: LPA – 80063/4CF	Antenna Type: LPA – 80063/4CF
Frequency: Tx: 869-880,890-891.5 MHz; Rx: 824-835, 845-846.5 MHz	Frequency: Tx: 869-880,890-891.5 MHz; Rx: 824-835, 845-846.5 MHz	Frequency: Tx: 869-880,890-891.5 MHz; Rx: 824-835, 845-846.5 MHz
No. Channels: 9	No. Channels: 9	No. Channels: 9
ERP/Channel: 383 W Max	ERP/Channel: 383 W Max	ERP/Channel: 383 W Max

700 MHz Antennas

Alpha Sector – 110 ft.	**Beta Sector – 110 ft.**	**Gamma Sector – 110 ft.**
Antenna Type: BXA–70063/6CF (1)	Antenna Type: BXA–70063/6CF (1)	Antenna Type: BXA–70063/6CF (1)
Frequency: 746-757 MHz (200 MHz)	Frequency: 746-757 MHz (200 MHz)	Frequency: 746-757 MHz (200 MHz)
No. Channels: 1	No. Channels: 1	No. Channels: 1
ERP/Channel: 787 W Max	ERP/Channel: 787 W Max	ERP/Channel: 787 W Max

Question No. 8

What is the lowest height at which Cellco's antennas could achieve its coverage objectives from this site? Submit propagation maps showing the coverage at ten feet below this height.

Response

Cellco's antennas must be located at the 110-foot level to achieve its PCS coverage objectives in the northern portion of Milford. Composite coverage plots showing Cellco's existing and proposed PCS and cellular coverage with the Milford East antennas at 100 feet, ten feet below the proposed antenna height, are included in Attachment 1.

Question No. 9

Provide propagation maps showing only the PCS and cellular coverages from the proposed site.

Response

The coverage maps requested are included in Attachment 2. The Council may notice that the coverage footprint for the PCS and cellular systems shown on these "stand-alone" plots are substantially similar. Normally, the Council would expect to see the coverage footprint for cellular to be substantially larger than the PCS coverage footprint. The cellular plot included in Attachment 2 however, takes into consideration Cellco's plans to "down-tilt" the cellular antennas at this site. By doing so, Cellco can limit the cellular coverage footprint from this site and avoid potential interference and redundancy problems that might otherwise result from the proposed Milford East cell site.

Question No. 10

Of the letters sent to abutting property owners, how many certified mail receipts did Cellco receive? If any receipts were not returned, which owners did not receive their notice? Did Cellco make additional attempts to contact those property owners?

Response

Cellco has received return receipts from all abutting property owners listed behind Tab 5 of the Application.

Question No. 11

What is the in-vehicle signal strength for which Cellco designs its system? The in-building signal strength? Are these signal strengths the same for both cellular and PCS service? If not, please explain.

Response

Cellco's minimum signal level threshold is -75 dBm for in-building service and -85 dBm for in-vehicle service at both PCS and cellular frequencies. Cellco anticipates these same thresholds will apply to its 700 MHz system.

Question No. 12

What is the existing signal strength in those areas Cellco is seeking to cover from this site? How were these signal strengths determined?

Response

Cellco's signal strength in the area around the proposed Milford East Facility ranges from -86 dBm to -100 dBm at PCS frequencies and -86 dBm to -95 dBm at cellular frequencies. RF engineers determined these signal strength levels through the use of baseline drive data and propagation modeling tools.

Question No. 13

Did Cellco conduct any drive tests for this site? If so, provide information depicting the results of these tests.

Response

Cellco did not perform a drive test at this proposed cell site location.

Question No. 14

Does Cellco have any coverage gaps on the major roads to be covered from the proposed facility? What are the respective distances of these gaps?

Response

Cellco's principal coverage objective for the Milford East cell site is to fill an existing 2.76 mile PCS coverage gap along State Route 121 in Milford and portions of Orange.

Question No. 15

Would this facility provide PCS coverage on Route 15?

Response

No.

Question No. 16

Quantify the amounts of cut and fill that would be required to develop this site.

Response

Construction of the Milford East facility will result in a total "cut" of approximately 220 cubic yards of material. No fill material is required.

Question No. 17

Would any blasting be required to develop this site?

Response

Cellco does not anticipate the need for blasting during construction of the Milford East facility. If rock is encountered during construction it could be removed using mechanical methods rather than blasting. Boulders, if encountered, could also be removed without blasting.

Question No. 18

How would utilities be brought to the site?

Response

Utilities (electric and telephone) will extend underground from existing service along Orange Avenue to the cell site. The precise location for the underground utilities will be determined by CL&P following the Council's approval of the Milford East application.

Question No. 19

How would Cellco mount its antennas on the proposed tower?

Response

Cellco plans to attach its antennas to a low-profile platform at the 110' level on the tower.

Question No. 20

To what standard would the tower be designed? The application says Electronic Industries Association Standard EIA/TIA-222-E "Structural Standards for Steel Antenna Towers and Antenna Support Structures."

Response

Pursuant to Section 3108 of the 2003 International Building Code, the tower will be designed to meet the requirements of EIA/TIA-222-F. An analysis will also be prepared in accordance to the requirements of the most current version of EIA/TIA-222-G. The more stringent of the two versions will be used for the final design of the Milford East tower.

Question No. 21

The application states that Cellco would install three 700 MHz antennas on the proposed tower. What is the purpose of these antennas?

Response

With the rollout of its 700 MHz service, Cellco will be able to provide enhanced broadband wireless services to its customers in the north Milford area. Initially the 700 MHz spectrum will be used for high speed wireless internet access and other similar services.

Question No. 22

What kind of system would there be to contain any potential spills from the backup diesel generator?

Response

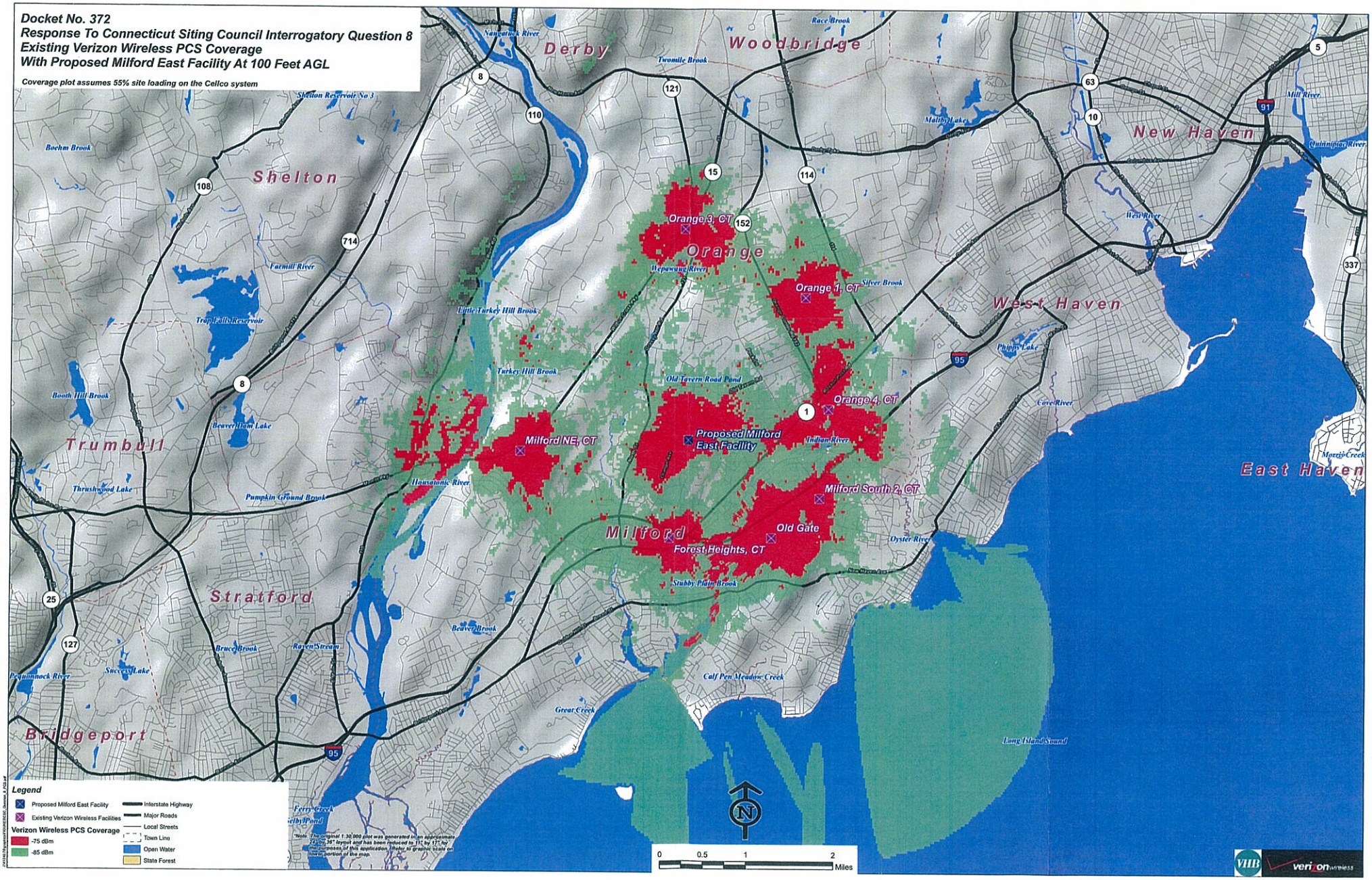
The generator unit maintains a 275 gallon "belly" tank as an integral part of the generator unit. The generator and fuel tank will be maintained in a segregated 10' x 12' generator room within Cellco's 12' x 30' equipment shelter. The fuel tank is double-walled and maintains leak detection alarms. As a third level of spill containment, the floor of the generator room is depressed several inches below the threshold of the entrance doorway creating a bowl-like effect. The generator room floor as designed is capable of containing 120% of the volume of all generator fluids (fuel, lubricants, etc.) in the unlikely event of a complete generator failure. Leak detection alarms are also built into the floor of the generator room.

Question No. 23

Describe the predominate types of vegetation in the wooded areas to the north and east of the proposed site.

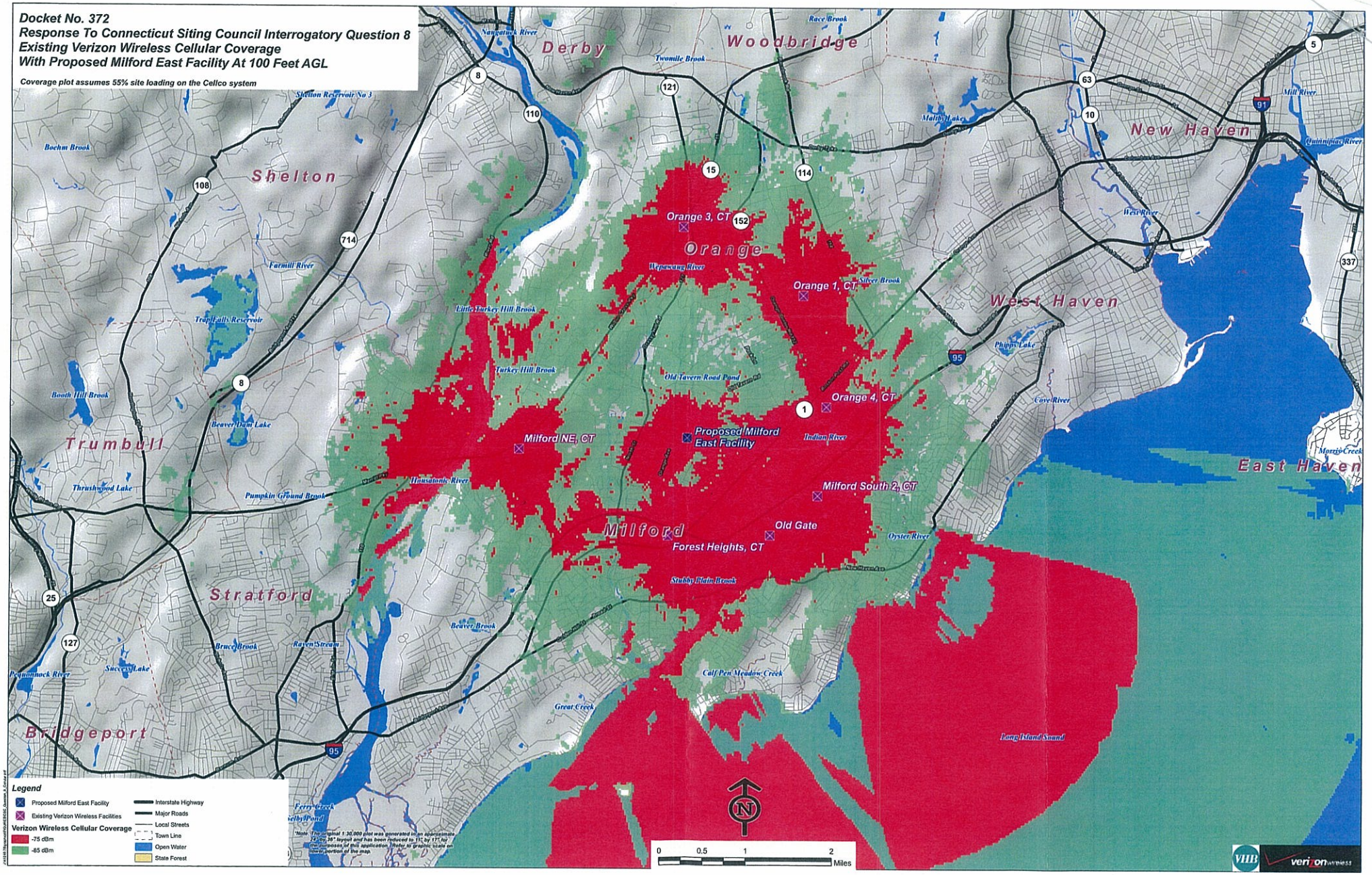
Response

The immediate forested areas to the north and east of the proposed site consist of upland mature forest with a moderate shrub understory. Dominant species include red oak, American beech, yellow poplar, multiflora rose, Japanese barberry and Asiatic bittersweet. Approximately 50 feet east of the proposed site is a forested wetland area dominated by red maple, black gum, winterberry, northern arrowwood, pepperbush and winterberry.


Docket No. 372
Response To Connecticut Siting Council Interrogatory Question 8
Existing Verizon Wireless PCS Coverage
With Proposed Milford East Facility At 100 Feet AGL
Coverage plot assumes 55% site loading on the Cellco system
Derby
Woodbridge
Shelton
New Haven
West Haven
East Haven
Orange
Trumbull
Stratford
Milford
Bridgeport
Orange 3, CT
Orange 1, CT
Orange 4, CT
Milford NE, CT
Proposed Milford East Facility
Milford South 2, CT
Old Gate
Forest Heights, CT
Housatonic River
Long Island Sound
Legend
Proposed Milford East Facility
Existing Verizon Wireless Facilities
Verizon Wireless PCS Coverage
-75 dBm
-85 dBm
Interstate Highway
Major Roads
Local Streets
Town Line
Open Water
State Forest
0 0.5 1 2 Miles

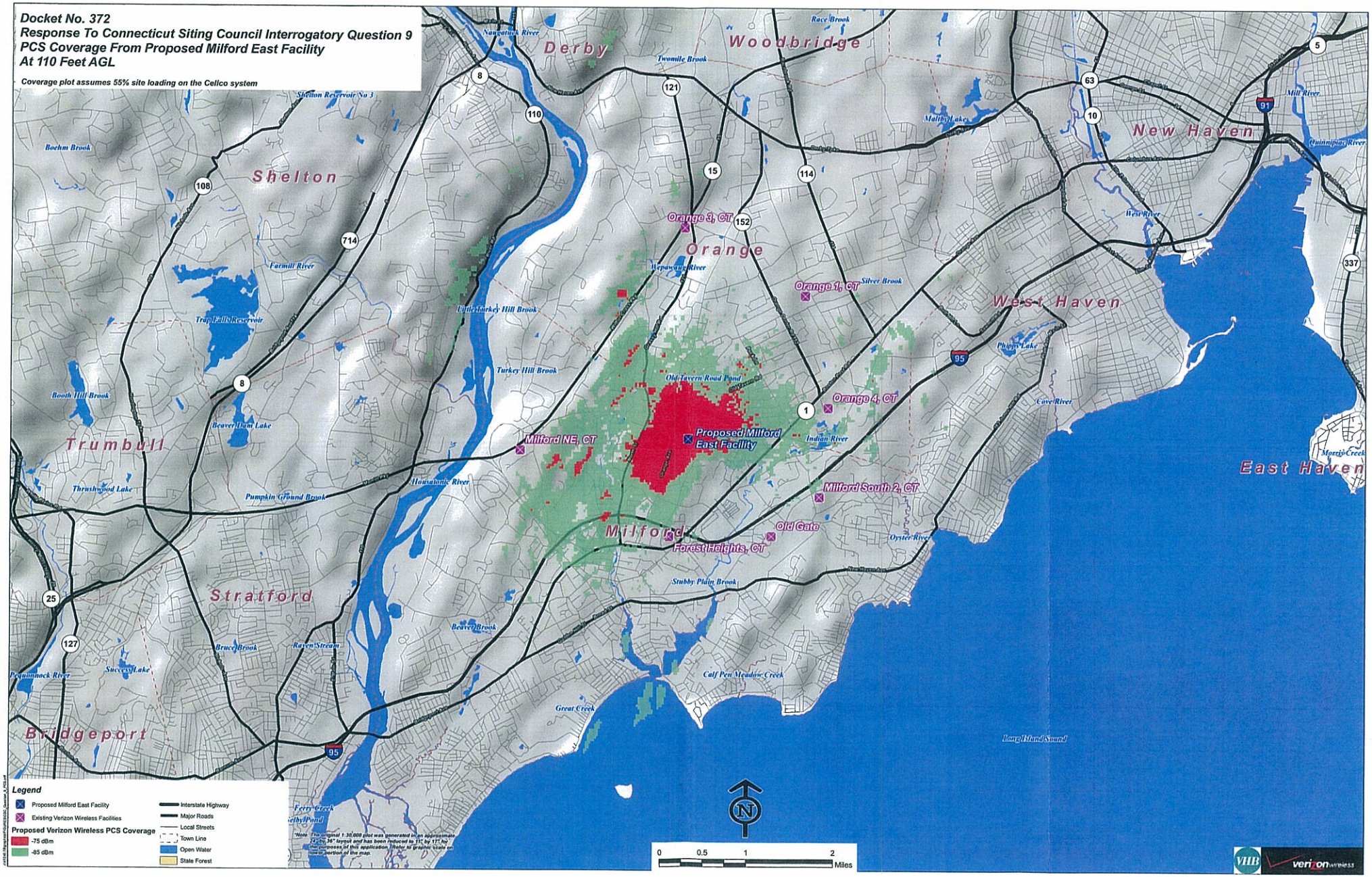
Docket No. 372
Response To Connecticut Siting Council Interrogatory Question 8
Existing Verizon Wireless Cellular Coverage
With Proposed Milford East Facility At 100 Feet AGL

Coverage plot assumes 55% site loading on the Cellco system



Docket No. 372
Response To Connecticut Siting Council Interrogatory Question 9
PCS Coverage From Proposed Milford East Facility
At 110 Feet AGL

Coverage plot assumes 55% site loading on the Cellco system



Legend

- Proposed Milford East Facility
- Existing Verizon Wireless Facilities

Proposed Verizon Wireless PCS Coverage

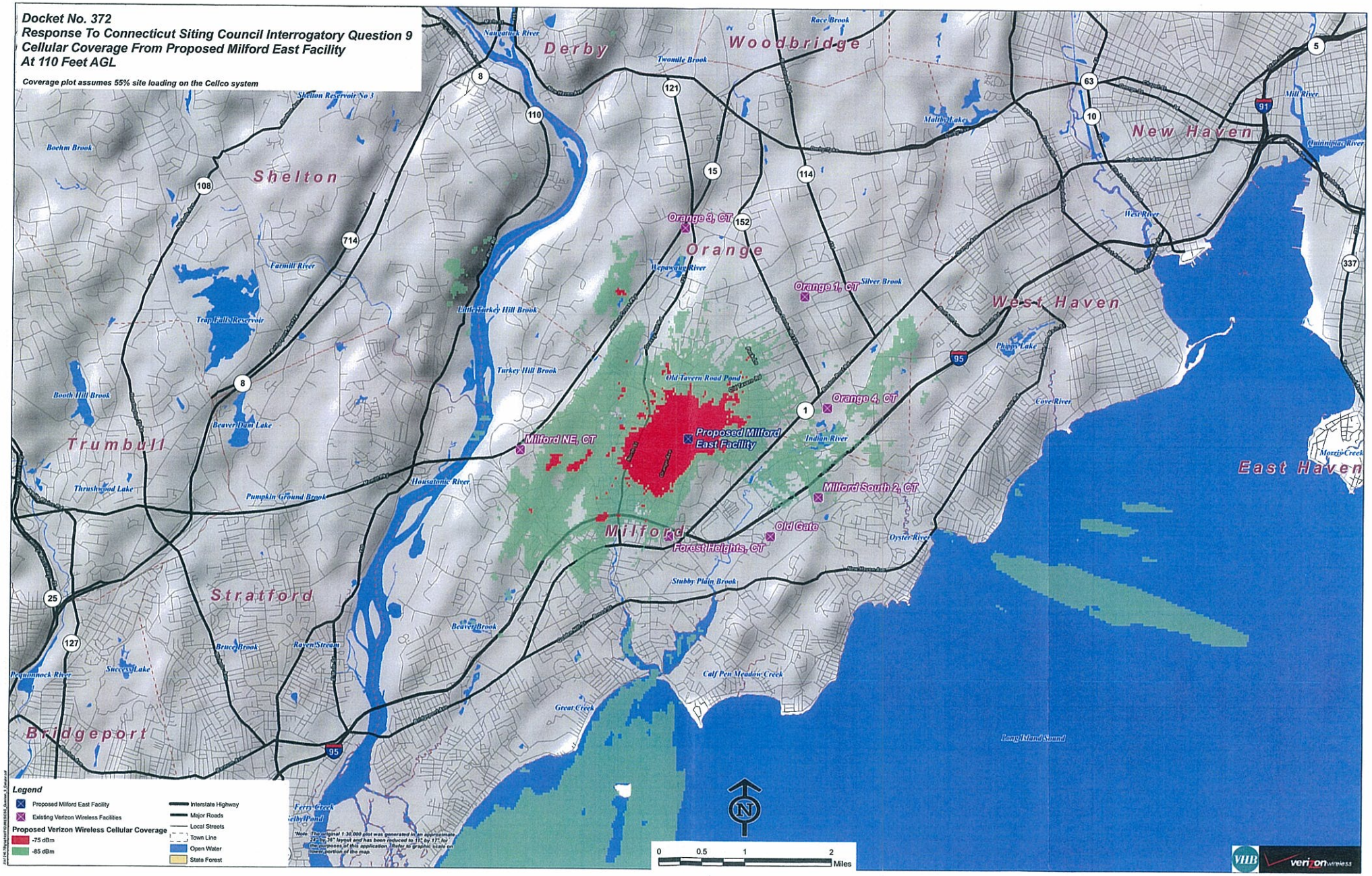
- -75 dBm
- -85 dBm

- Interstate Highway
- Major Roads
- Local Streets
- Town Line
- Open Water
- State Forest

*Note: The original 1:30,000 plot was generated in an approximate 25"x36" layout and has been reduced to 11" by 17" for the purposes of this application. Thicker or graphic scale on lower portion of the map.

0 0.5 1 2 Miles

VHB verizonwireless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Cellular Coverage From Proposed Milford East Facility
At 110 Feet AGL
Coverage plot assumes 55% site loading on the Cellco system
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Woodbridge
Shelton
New Haven
Orange
West Haven
Trumbull
Milford
Stratford
Bridgeport
East Haven
Orange 3, CT
Orange 1, CT
Orange 4, CT
Milford NE, CT
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Milford South 2, CT
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Proposed Milford East Facility
Existing Verizon Wireless Facilities
Proposed Verizon Wireless Cellular Coverage
-75 dBm
-85 dBm
Interstate Highway
Major Roads
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Town Line
Open Water
State Forest
0 0.5 1 2
Miles
verizon wireless