



Memo To: Town of Fishkill, NY

From: Michael Alaia, Sean Haynberg, V-COMM, LLC

Date: July 23, 2024

Subject: Homeland Towers NY057 Weiss Pond Site – Alternative Site Proposition

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Planning Department
Town of Fishkill

V-COMM has analyzed 2 alternative site locations in this report, in comparison to the proposed subject Weiss Pond site, along with the existing on-air surrounding sites for the Verizon network in this area of Fishkill, NY. See Table 1 and Map 1 below, which provides and shows the existing on-air Verizon sites in the area, along with the 2 alternate sites, and the proposed subject Weiss Pond site. Below we assess the coverage provided from the 2 alternate site locations, as compared to the proposed Weiss Pond site for the Verizon network, which considers the 2 alternate sites on taller 190 foot towers, with antenna centerline height of 187 feet above ground level (AGL), which are 40 foot taller towers than the proposed Weiss Pond site. The two alternate site locations were studied with taller towers due to the lower ground elevation at those locations, as compared to the proposed Weiss Pond site's ground elevation, and being located further north of the Weiss Pond site and the required coverage gap area.

TABLE 1 – PROPOSED, EXISTING AND ALTERNATE SITES IN AND AROUND FISHKILL, NY

Cell Name	Address	Structure Type	Latitude Longitude	Antenna Model	Azimuth (Deg TN)	EIRP 750/2100MHz (Watts)	Antenna C/L in Ft. AGL
NY057 WEISS POND (Proposed Site)	73 Route 9 Fishkill	Monopole	41.4955 -73.9007	Commscope NHH-65B-R2B	0/120/190	1000/1995	147
NY057 WEISS POND (Alternate Site 1)	3000-3002 Route 9 Fishkill	Monopole	41.5044 -73.9012	Commscope NHH-65B-R2B	15/120/190	1000/1995	187
NY057 WEISS POND (Alternate Site 2)	3006 Route 9 Fishkill	Monopole	41.8862 -73.9018	Commscope NHH-65B-R2B	15/120/190	1000/1995	187
ELECTRIC BLANKET	423-425 Main Street Beacon	Rooftop	41.5029 -73.9666	Commscope NHH-65B-R2B	90/180/320	1000/1995	65
FISHKILL DT	5 Merritt Boulevard Fishkill	Monopole	41.5315 -73.8937	Commscope NHH-65B-R2B	40/160/280	1000/1995	122.5
FISHKILL G1	416 Carey Road – Honness Mtn Fishkill	Lattice	41.5314 -73.8634	Commscope NHH-65B-R2B	100/230/0	1000/1995	123.6
FISHKILL WEST	841 Route 52 Fishkill	Monopole	41.5276 -73.9199	Commscope NHH-65B-R2B	0/120/240	1000/1995	98.5
NORTH HIGHLANDS	Route 9 Albany Post Road Cold Spring	Monopole	41.4708 -73.9174	Commscope NHH-65B-R2B	102/222/0	1000/1995	110

WIRELESS SERVICE

RF Coverage Deficiency


V-COMM has analyzed the proposed area for sufficient RF coverage and found that there is a gap in coverage for the Verizon wireless network in the 700 MHz frequency bands. Therefore, a new wireless facility is required to enhance the wireless service in this area.

V-COMM uses an industry accepted propagation modeling tool to produce RF propagation plots for its reports. The "Terrain Integrated Rough Earth Model" (TIREM) propagation model was utilized for this report. The propagation model "tuning" utilized standard operating parameters for topology in this area.

The proposed NY057 WEISS POND site will be located on a proposed 150 foot monopole located on 73 Route 9 in Fishkill, NY. This is the minimum height needed to provide the coverage to the area for the Verizon network. The height of the subject site places it above all vegetation in the targeted coverage area, thus allowing increased site coverage. Taking into account the coverage and design requirements for a

macrocell network in this part of Fishkill, the proposed site is in a suitable location to provide the required coverage to the Verizon network.

The propagation map is drawn showing the region where the signal strength in Reference Signal Received Power (RSRP) equates to the following minimum signal strength threshold:

 RSRP \geq -95 dBm is the minimum acceptable received signal level for reliable indoor service, and is represented by the highlighted areas (green shaded areas) at -95 dBm signal strength or greater. This signal level will provide reliable wireless service to indoor and outdoor locations. Thus, this minimum signal level, which provides reliable service to both indoor and outdoor locations, is used to provide fill-in service within the gap in coverage for the Verizon network.

The propagation map titled "Map 2 - Existing 750 MHz Coverage" depicts wireless service from the closest existing Verizon sites. The "gap" area that lacks adequate coverage includes the following roads:

- Beginning at 3556 Albany Post Road heading north along a stretch of Route 9 for approximately 1.4 miles. The annual estimated 2019 Annual Average Daily Traffic (AADT) vehicle count heading both north and southbound through the gap area is reportedly 18,340. The objective to enhance the coverage of this road is to connect to the existing coverage of the southern N. Highlands Tower site.
- Additionally, Carol Lane, Baseline Road, Treeline Cir, Boulder Road, Babbling Brook Lane and 0.25 miles of East Mountain Road North traveling eastward.

The propagation map titled "Map 3 - Proposed 750 MHz Coverage with NY057 WEISS POND" depicts the wireless service from the closest existing sites along with coverage from the subject "NY057 WEISS POND" site at the proposed antenna centerline (ACL) of 147 feet above ground level, showing the expanded coverage area provided by the proposed site, which provides good fill-in coverage in the gap in service for the Verizon wireless network in this area of Fishkill, NY.

The propagation map titled "Map 4 - Proposed 750 MHz Coverage with NY057 WEISS POND ALTERNATE SITE 1" depicts the wireless service from the closest existing sites along with coverage from the "NY057 WEISS POND ALTERNATIVE SITE 1" site at the proposed antenna centerline (ACL) of 187 feet above ground level, showing the coverage area provided by the Alternate site 1. Ground elevation at Alternate site 1 is 230 ft, which is 45 ft lower than the proposed Weiss Pond site. It is observed that 750 MHz coverage begins to decay along Albany Post Road similarly to the existing coverage. Also, there is no additional coverage provided to the Baseline Road and Treeline Circle neighborhood. Thus, this alternate site location does not fill in the gap in service for the Verizon network in this area of Fishkill, NY.

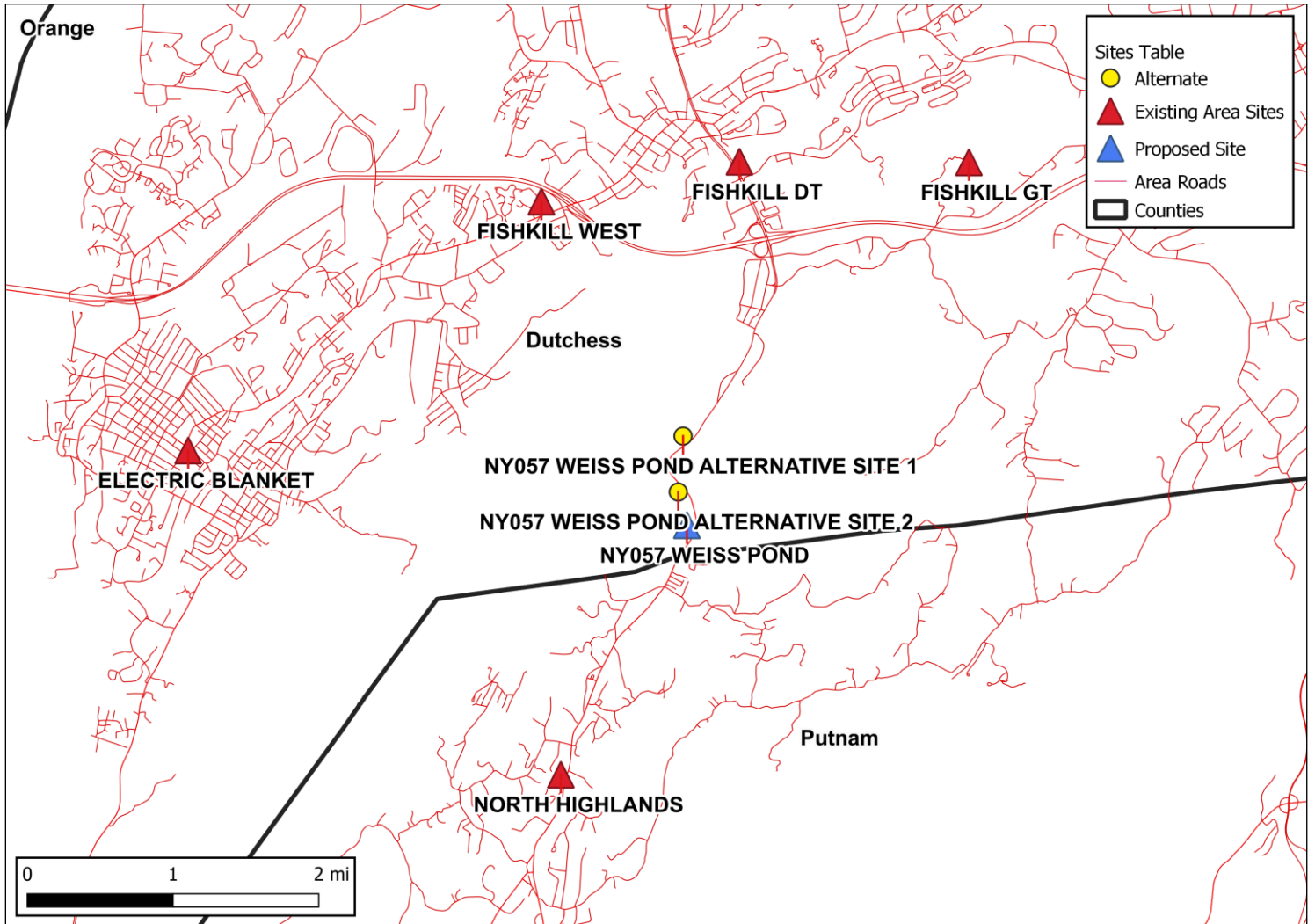
The propagation map titled "Map 5 - Proposed 750 MHz Coverage with NY057 WEISS POND ALTERNATE SITE 2" depicts the wireless service from the closest existing sites along with coverage from the "NY057 WEISS POND ALTERNATIVE SITE 2" site at the proposed antenna centerline (ACL) of 187 feet above ground level, showing the coverage provided by the proposed site. Ground elevation at Alternate site 2 is 255 ft, which is 20 ft lower than the proposed Weiss Pond site. It is observed that there is some expanded 750 MHz coverage along Albany Post Road, however it does not fully cover this road, and does not fully cover the gap in service, lacking coverage in some parts of this road, East Mountain Road, and the surrounding area for the Verizon network. The proposed Weiss Pond site location provides denser and broader area coverage than the Alternate Site 2's coverage in this area.

The propagation map titled "Map 6 - Existing 2100 MHz Coverage" depicts wireless service from the closest existing Verizon sites. And, the propagation map titled "Map 7 - Proposed 2100 MHz Coverage with NY057 WEISS POND" depicts the wireless service from the closest existing sites along with coverage from the subject "NY057 WEISS POND" site at the proposed antenna centerline (ACL) of 147 feet above ground level, showing the expanded coverage area provided by the proposed site at the 2100 MHz frequency band.

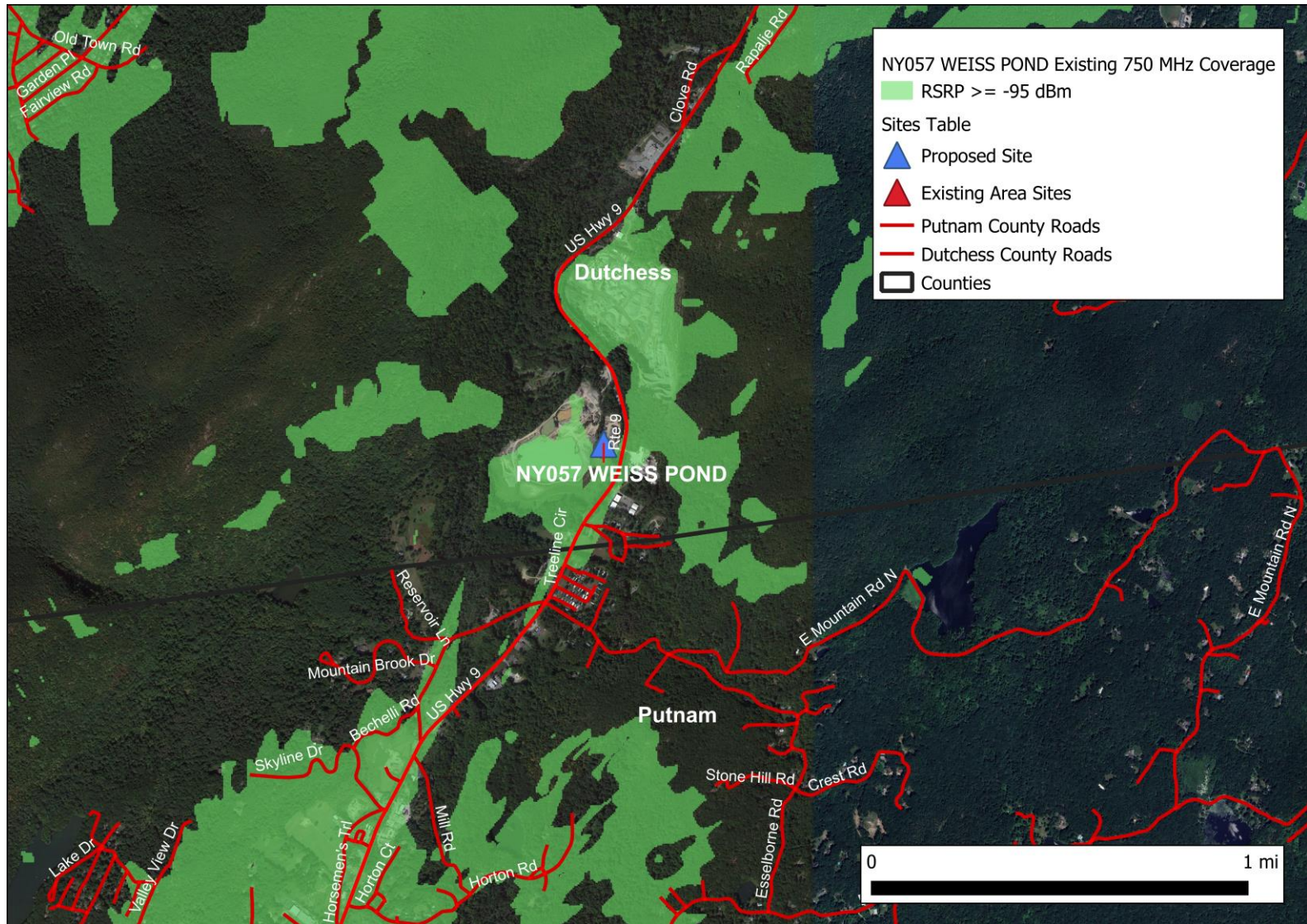
The propagation map titled "MAP 8 - Proposed 2100 MHz Coverage with NY057 WEISS POND ALTERNATIVE SITE 1" depicts the wireless service from the closest existing sites along with coverage from the "NY057 WEISS POND ALTERNATIVE SITE 1" site at an ACL of 187 feet above ground level. It is observed that the alternative site does not provide any additional 2100 MHz coverage along Route 9, Albany Post Road, Carrol Lane, or the Baseline Road and Treeline Circle neighborhood than that of the existing coverage.

The propagation map titled "MAP 9 - Proposed 2100 MHz Coverage with NY057 WEISS POND ALTERNATIVE SITE 2" depicts the wireless service from the closest existing sites along with coverage from the "NY057 WEISS POND ALTERNATIVE SITE 2" site at an ACL of 187 feet above ground level. It is observed that the alternative site provides slight 2100 MHz coverage to Route 9, but there is a significant drop in coverage towards Albany Post Road. Also, there is some increase in coverage to Carrol Lane, but no additional coverage is provided to the Baseline Road and Treeline Circle neighborhood from the site. Although Alternate Site 2 does provide some coverage improvement to Carrol Lane, the coverage provided by the proposed Weiss Pond site will offer substantially improved coverage than that of the Alternate Site 2 location for this area.

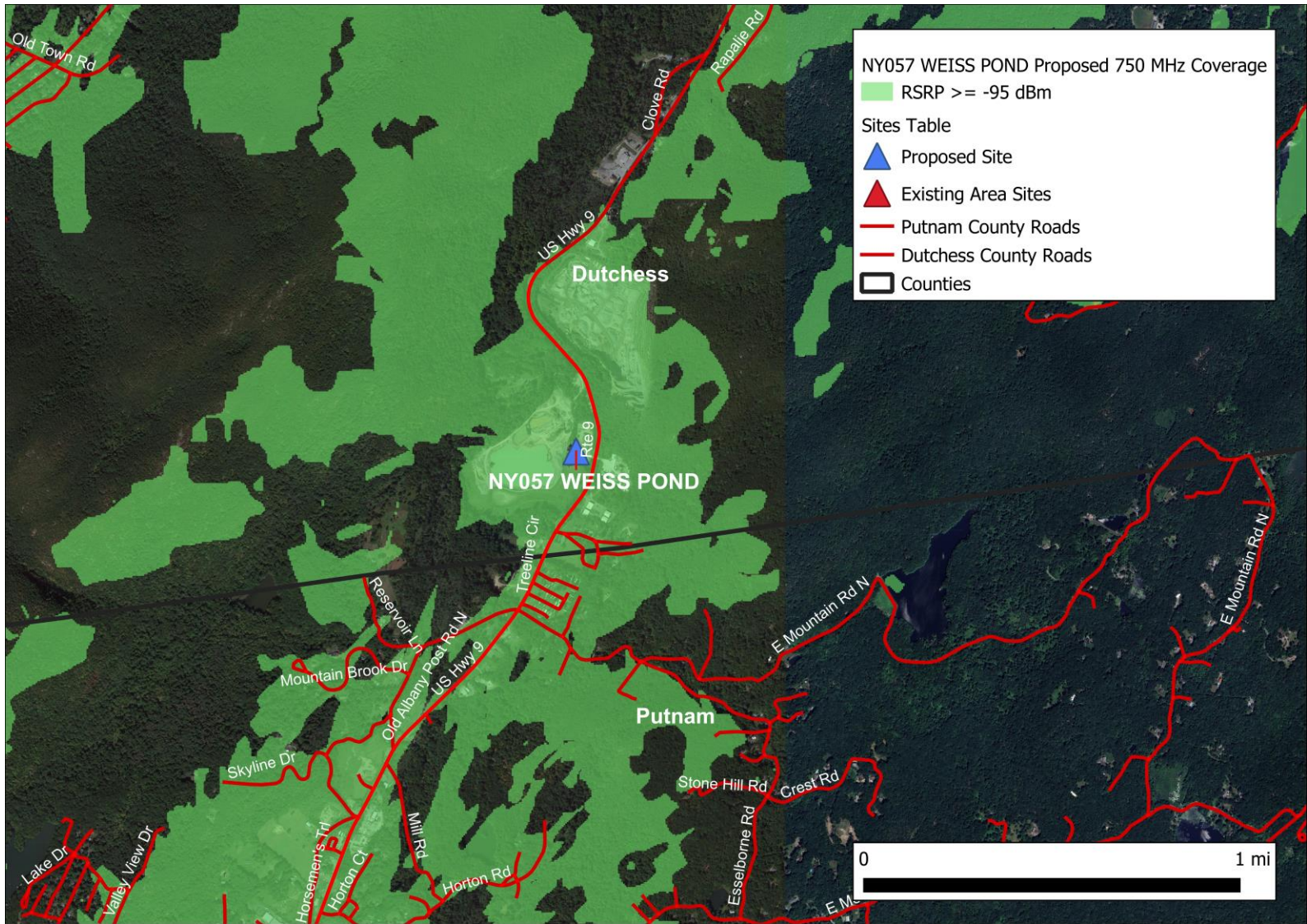
MAP 1 – EXISTING, PROPOSED, AND ALTERNATE SITES



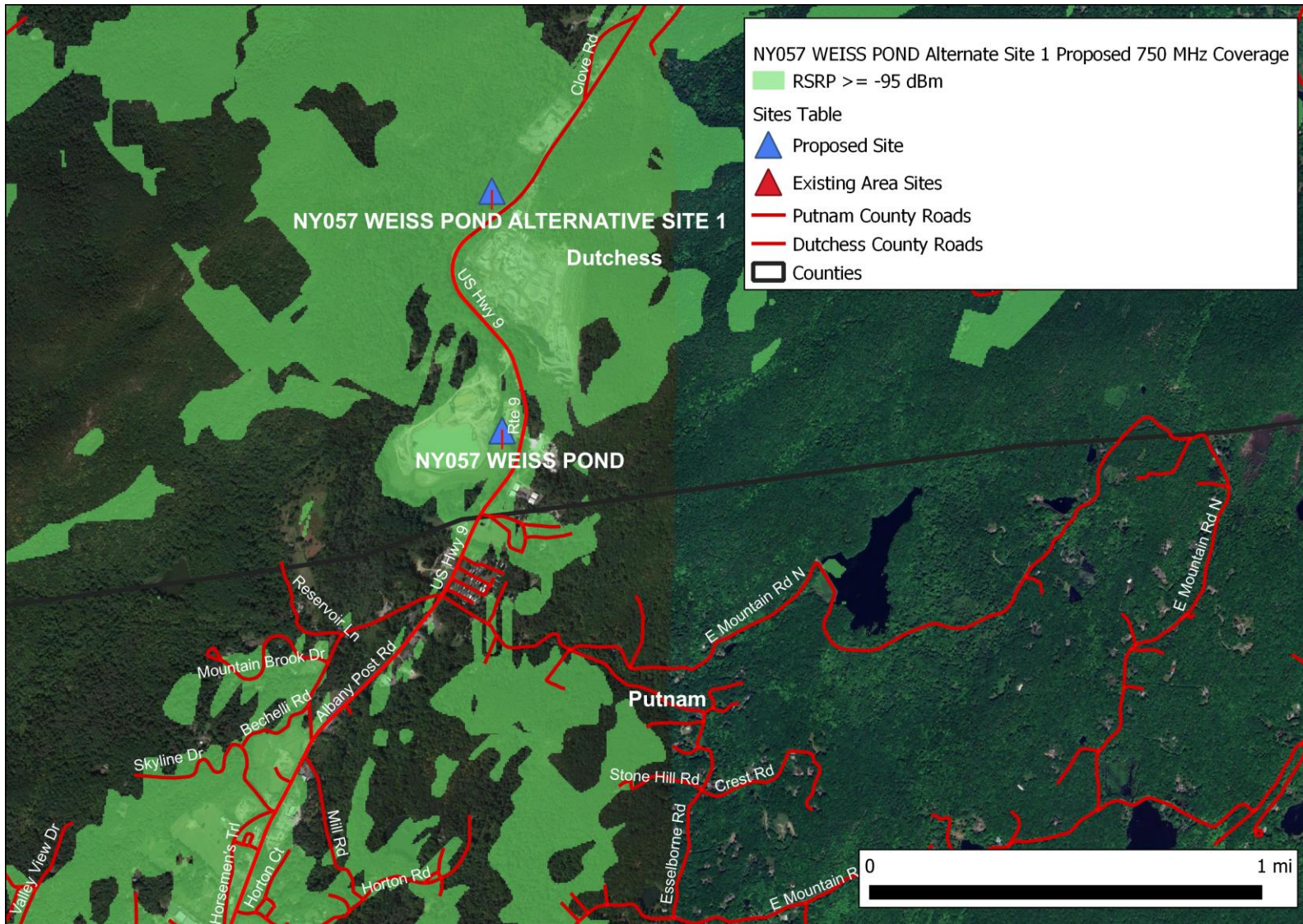
MAP 2 – Existing 750 MHz Coverage



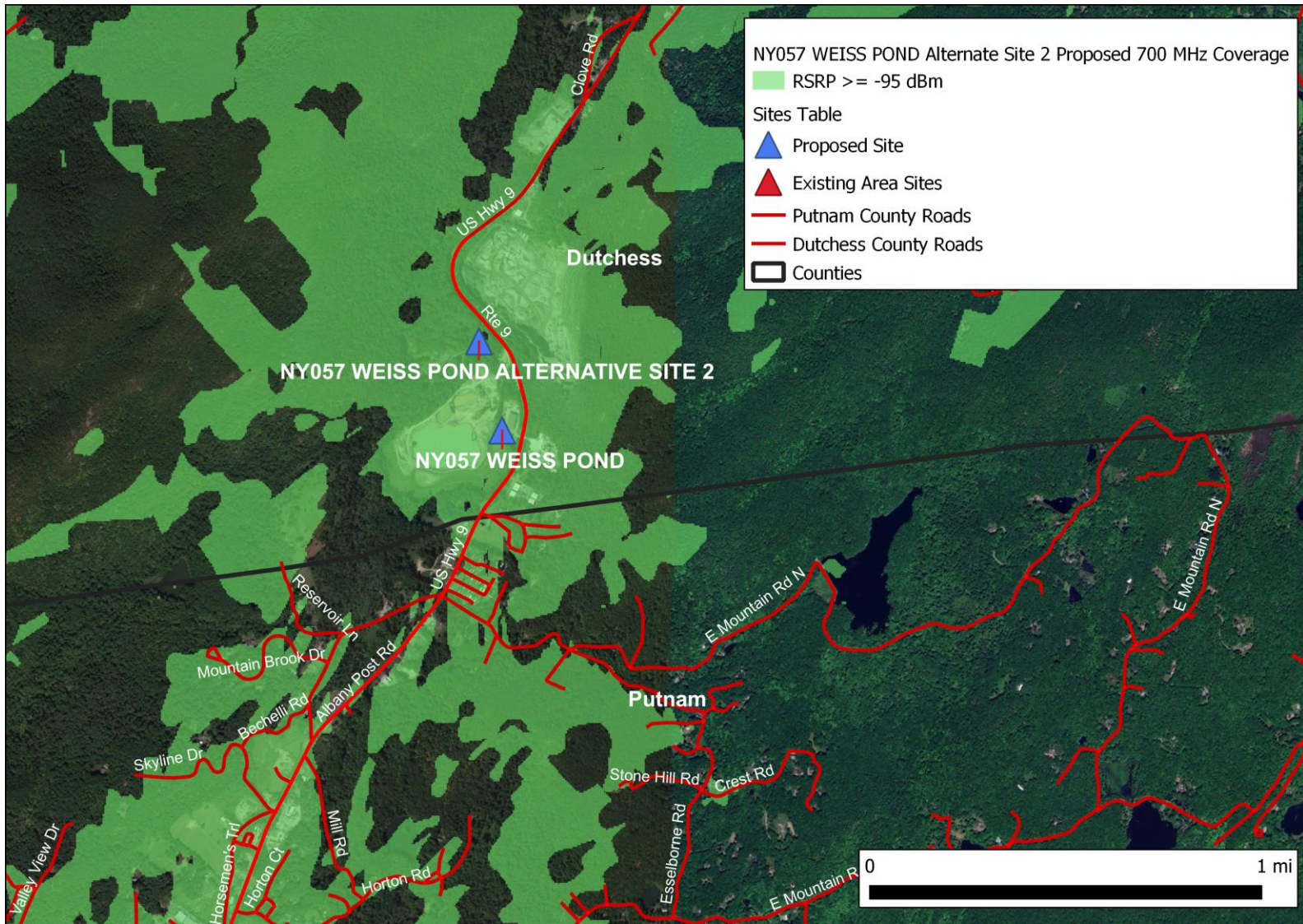
MAP 3 - Proposed 750 MHz Coverage with NY057 WEISS POND



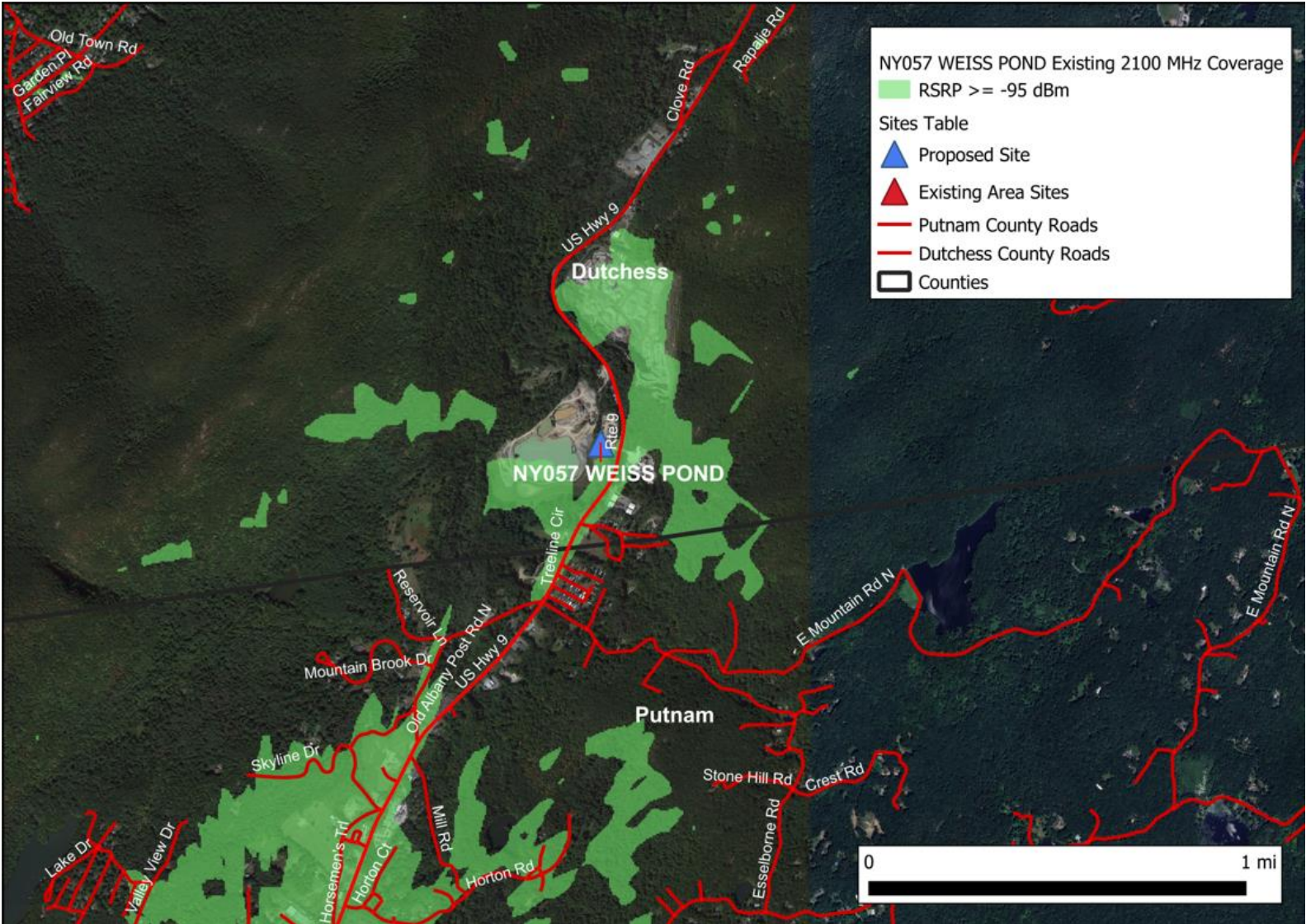
MAP 4 - Proposed 750 MHz Coverage with NY057 WEISS POND ALTERNATE SITE 1



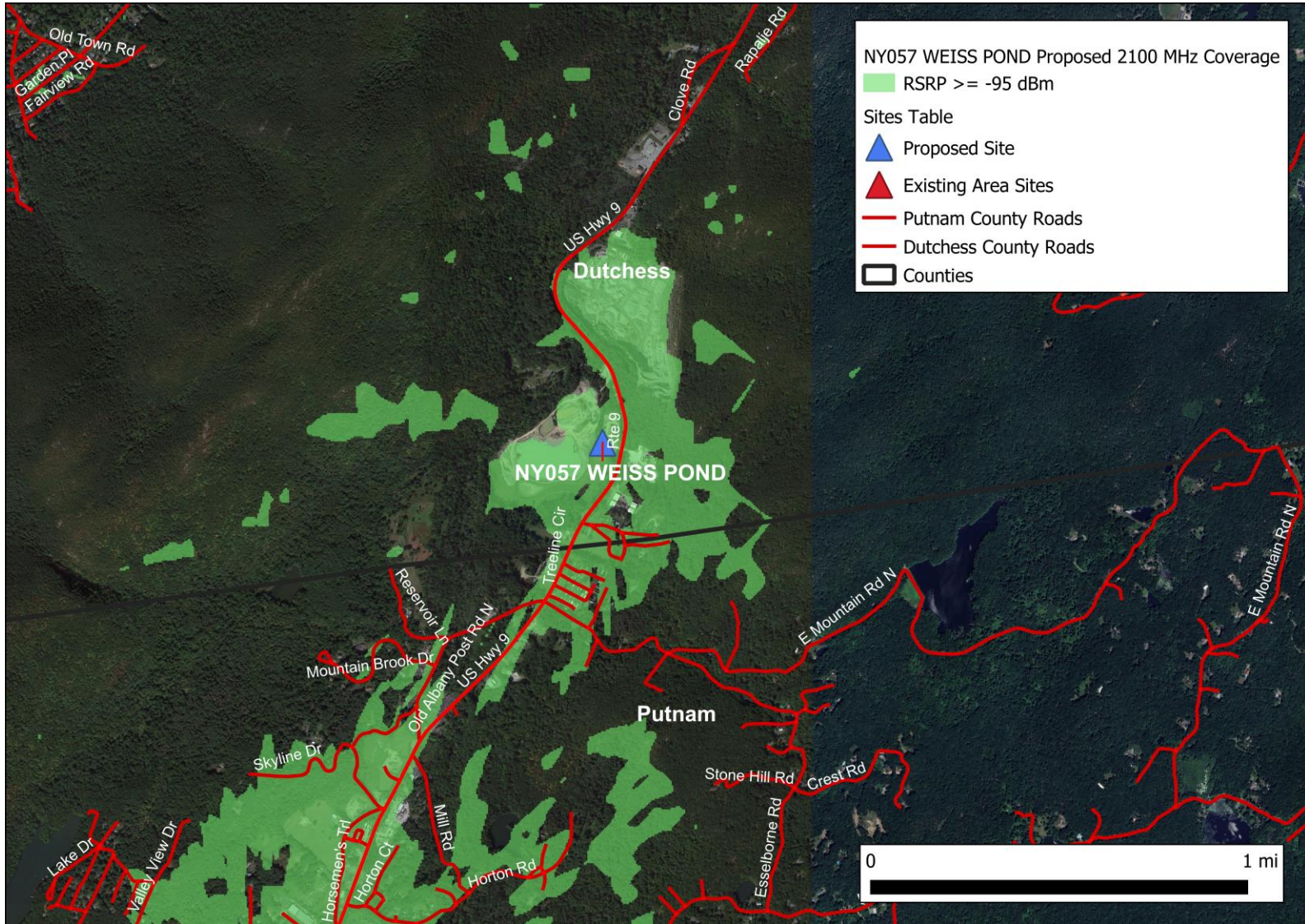
MAP 5 - Proposed 750 MHz Coverage with NY057 WEISS POND ALTERNATE SITE 2



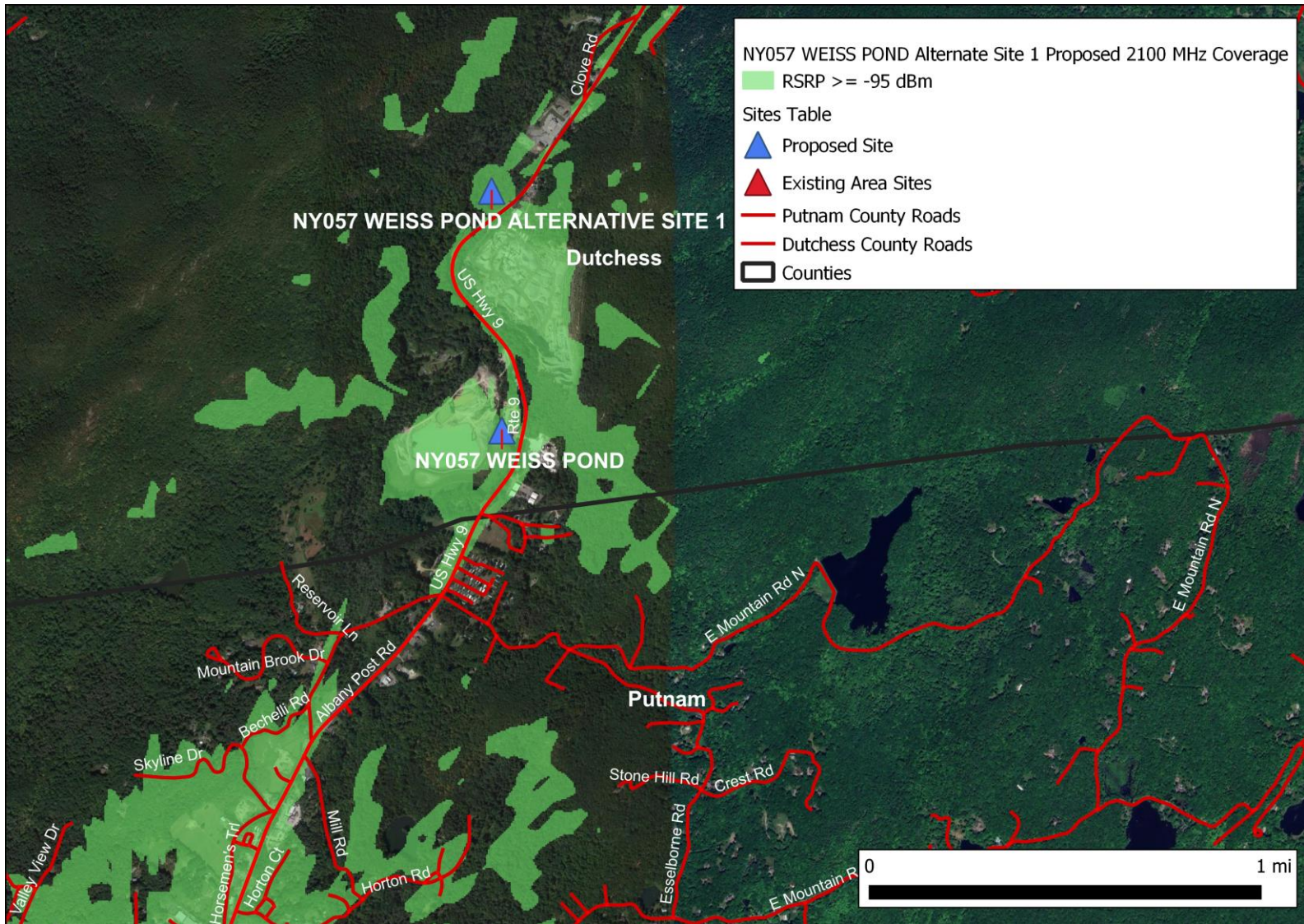
MAP 6 - Existing 2100 MHz Coverage



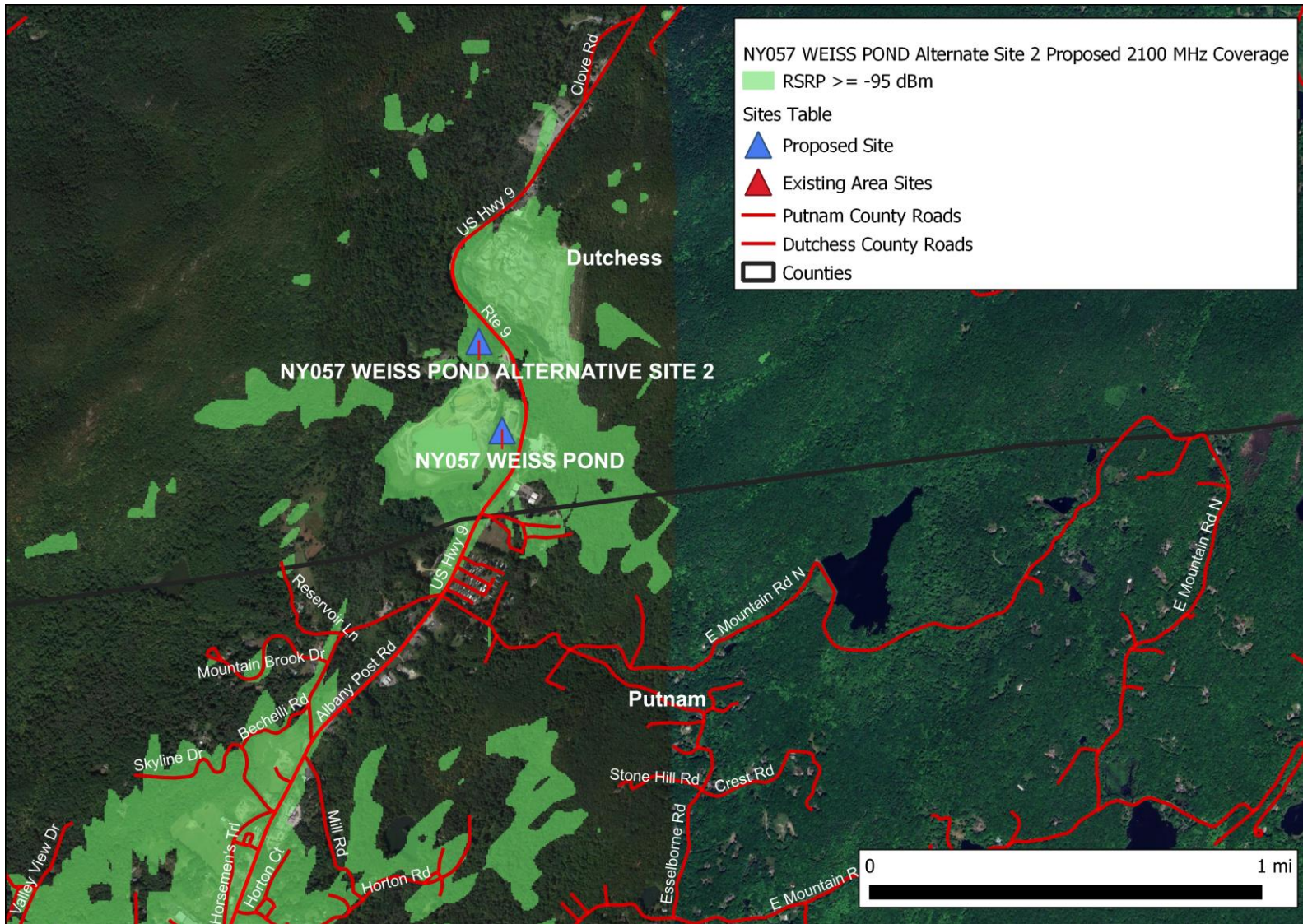
MAP 7 - Proposed 2100 MHz Coverage with NY057 WEISS POND



MAP 8 - Proposed 2100 MHz Coverage with NY057 WEISS POND ALTERNATIVE SITE 1



MAP 9 - Proposed 2100 MHz Coverage with NY057 WEISS POND ALTERNATIVE SITE 2



Therefore, for reasons stated above, the 2 alternate site locations do not cover into the gap in service for the Verizon network in this area of Fishkill, NY. The proposed Weiss Pond site location will provide robust coverage to all demonstrated 'coverage gap' areas required for this site for the Verizon network, which includes one of the main objectives for the proposed site to provide continuous coverage along Route 9 south to the Verizon N. Highlands Tower site. The proposed Weiss Pond site location is the only location suitable to provide coverage to these areas. The 2 alternate site locations prevent the ability to provide adequate additional coverage to the gap areas and continuous coverage along Route 9 as mentioned above, and therefore are not suitable replacement sites for the proposed Weiss Pond site for the Verizon network.



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