

Next Gen TV Host Exhibit

TEGNA Inc. (“TEGNA”), on behalf of its subsidiary TEGNA Broadcast Holdings, LLC (“Licensee”), licensee of television station WCCT-TV, Waterbury, Connecticut (“WCCT”), hereby seeks to modify its Next Gen TV license to incorporate its existing ATSC 1.0 multicast hosting arrangements, pursuant to the transition procedures set forth in the Media Bureau’s Public Notice dated November 16, 2023.¹ The ATSC 1.0 simulcast of WCCT’s primary stream will continue to be hosted on sister station WTIC-TV, Hartford, Connecticut (“WTIC”).

WCCT commenced broadcasting in the Next Gen Television standard on October 12, 2021. WCCT broadcasts its own CW-affiliated primary stream, the Fox-affiliated primary stream of its sister station WTIC-TV, Hartford, Connecticut (Facility ID 147) (“WTIC”), and the primary streams of ABC affiliate WTNH, New Haven, Connecticut (Facility ID 74109) (“WTNH”), CBS affiliate WFSB, Hartford, Connecticut (Facility ID 53115) (“WFSB”), and NBC owned-and-operated station WVIT, New Britain, Connecticut (Facility ID 74170) (“WVIT”).

Because WTIC does not have sufficient bandwidth to host WCCT’s multicast channels, the Commission granted Licensee’s request for Special Temporary Authority for WFSB and WTNH to serve as ATSC 1.0 hosts for WCCT’s multicast streams.² Licensee has entered into channel sharing arrangements for WFSB and WTNH to serve as ATSC 1.0 hosts for WCCT’s multicast streams. Because WCCT and WTIC are commonly owned, no written simulcast agreement is required between those stations.³

WCCT’s hosting arrangements will remain as follows, in accordance with the arrangement the Video Division approved in the *WCCT Multicast Hosting Amendment and Extension*:

Virtual Channel	Affiliation	Resolution	Host	Host RF Channel	ATSC 3.0 Simulcast
20.1	CW (Primary)	720p	WTIC	34	Yes
20.2	Grit	480i	WFSB	36	No
20.3	Comet	480i	WFSB	36	No
20.4	Quest	480i	WTNH	10	No

Host Capacity Limit

The proposed hosting arrangements comply with the Commission’s host capacity limit because WCCT was broadcasting the same number of streams, at the same resolutions, in ATSC 1.0 immediately prior to commencing Next Gen TV operation.⁴

¹ *Media Bureau Announces that All Next Gen TV ‘Multicast Licensing’ Rules Are Now In Effect And Next Gen TV License Applications for Multicast Streams Will Now Be Accepted*, Public Notice, DA 23-1086 (MB Nov. 16, 2023) (“*Multicast Licensing Transition PN*”).

² *TEGNA Broadcast Holdings, LLC*, Letter, LMS File No. 0000159942 (MB Vid. Div. Oct. 8, 2021) (“*WCCT Multicast Hosting Grant*”); *TEGNA Broadcast Holdings, LLC*, Letter, LMS File No. 0000202908 (MB Vid. Div. Dec. 12, 2022) (“*WCCT Multicast Hosting Amendment and Extension*”), extended by LMS File No. 0000214959.

³ *Authorizing Permissive Use of the “Next Generation” Broadcast Television Standard*, Third R&O and Fourth FNPRM, GN Docket No. 16-142, FCC 23-53 at ¶ 35 (June 23, 2023) (“*Next Gen TV Third R&O*”).

⁴ See 47 C.F.R. § 73.3801(i)(4)(ii); *WCCT Multicast Hosting Grant* at 2 (noting that WCCT then-broadcast its primary stream and three multicast streams). At the time WCCT converted to Next Gen TV operation, its ATSC 1.0 signal contained its CW-affiliated primary stream in 720p resolution and each of its three multicast streams in 480i resolution, which are the same as the resolutions those streams are broadcast in under the existing hosting arrangements.

Coverage Requirements

WCCT, WTIC, WFSB, and WTNH all are located in the Hartford & New Haven DMA.⁵

WTIC's signal covers WCCT's entire community of license and provides over-the-air access to WCCT's primary stream to 96.68 percent of the population within WCCT's ATSC 1.0 contour at the time WCCT transitioned to Next Gen TV operation.⁶

The signals of WFSB and WTNH each cover WCCT's entire community of license.⁷ WFSB's signal serves more than 91 percent of the population within WCCT's ATSC 1.0 contour at the time of the station's Next Gen TV transition.⁸ WTNH's signal serves more than 93 percent of the population within WCCT's ATSC 1.0 contour at the time of the station's Next Gen TV transition.⁹

Notices to MVPDs and Viewers

In advance of WCCT's conversion to Next Gen TV operation, WCCT notified MVPDs that its primary and multicast streams would be relocated as described herein.¹⁰ WCCT also aired public service announcements to inform viewers of its transition and of the need for viewers to rescan their televisions after the transition date in order to maintain over-the-air access to WCCT's program streams in ATSC 1.0 format.¹¹

Children's Programming

WCCT does not rely on any programming broadcast on its multicast streams for compliance with the Commission's children's programming requirements.¹²

Web Link

As required by Section 73.3801(f)(6)(D) of the Commission's rules, this exhibit is posted on WCCT's website at <https://www.fox61.com/article/about-us/fcc-notices/wcct-next-gen-tv-host-exhibit/520-29144a66-19b3-4993-8b24-af792e22ba45>.

⁵ 47 C.F.R. § 73.3801(c).

⁶ 47 C.F.R. § 73.3801(c), (f)(6)(ii). Attached as Attachment 1 hereto is WCCT's engineering statement submitted with WCCT's license modification application to commence Next Gen TV operation (LMS File No. 0000159940), which sets forth WTIC's technical parameters and contour maps of WTIC and WCCT.

⁷ 47 C.F.R. § 73.3801(c).

⁸ 47 C.F.R. § 73.3801(f)(6)(ii), (i)(4)(iii). Attached as Attachment 2 hereto is WCCT's engineering statement submitted with WCCT's request for special temporary authority to commence these multicast hosting arrangements (LMS File No. 0000159942), which sets forth the contour overlap between WCCT's ATSC 1.0 signal and each multicast host station.

⁹ See Attachment 2.

¹⁰ See 47 C.F.R. § 73.3801(h).

¹¹ See 47 C.F.R. § 73.3801(g).

¹² 47 C.F.R. § 73.3801(i)(3).

Attachment 1

COMPLIANCE WITH §73.3801 (SIMULCASTING DURING ATSC 3.0 TRANSITION)

WCCT-TV, Waterbury, Connecticut,¹ a full-service television facility, is licensed to TEGNA Broadcast Holdings, LLC. and is authorized to operate on Channel 33 with an ERP of 220 kW using an omni-directional antenna mounted on a tower with Antenna Structure Registration Number (ASRN) 1041624. WTIC-TV, Hartford, Connecticut,² a full-service television facility, also is licensed to TEGNA Broadcast Holdings, LLC. and is authorized to operate on Channel 34 with an ERP of 526 kW using a directional antenna mounted on a tower with ASRN 1005358.

The stations share a common DMA³ and plan to partner in an arrangement where WTIC-TV shall host tenant station WCCT-TV for purposes of simulcasting ATSC 1.0 emissions while WCCT-TV shall host tenant station WTIC-TV for the purposes of simulcasting ATSC 3.0 emissions.

Pursuant to section 73.3801(f)(6)(i) of FCC Rules, the following information is required for such a hosting arrangement:

- Station serving as the ATSC 1.0 host: WTIC-TV
- Technical facilities of the ATSC 1.0 host station:
 - Frequency: 593 MHz (Channel 34)
 - ERP: 526 kW
 - Antenna: Directional
 - Antenna Center Height: 389.0 m AGL
 - Antenna Model: TFU-18DSC/VP-R C170
 - Antenna Polarization: Elliptical
 - Antenna Beam Tilt: 1.0°

¹ FCC File No.: 0000080031

² FCC File No.: 0000080032

³ Hartford & New Haven, CT

- NAD83 Coordinates: 41° 42' 13.0" N, 072° 49' 55.0" W
- ASRN: 1005358

As demonstrated in the attached exhibit, WTIC-TV has a contracted contour to the SW and an expanded contour to the NE, N, NW, W and SW with respect to the currently licensed ATSC 1.0 facilities of WCCT-TV. The exhibit was produced by running the licensed WTIC-TV and WCCT-TV facilities in TVStudy V2.2.5 to generate geographical files using the "general-purpose study" option. The output was subsequently mapped in Arcmap v10.8. The metadata from coverpts.shp and points.shp have been merged to yield population figures along with the TVStudy result codes which determine signal coverage status for each cell studied. The merged data was filtered to remove all points that are not considered interference free service. The WTIC-TV coverage area was augmented to match the WCCT-TV noise limited contour such that a complete cell by cell comparison can be made between the two facilities beyond the contracted WTIC-TV contour. The resulting coverage areas are layered with the WTIC-TV blue cells overlapping and thus masking the WCCT-TV red cells such that if a blue cell is missing a red cell shows through visually indicating lost coverage area for WCCT-TV. Using Arcmap GIS functions, the population was tallied for all red visible non masked cells and are provided below. Pursuant to section 73.3801(f)(6)(ii) of FCC Rules, the analysis above and in the attached exhibit demonstrates that:

- Predicted terrain limited population within the WCCT-TV ATSC 1.0 licensed noise limited contour is 5,307,612 people
- Predicted terrain limited population within the WCCT-TV ATSC 1.0 licensed noise limited contour that will lose over-the-air access to WCCT-TV's ATSC 1.0 service due to the simulcasting arrangement is 176,411 people
- Predicted terrain limited population which lies between the WCCT-TV and WTIC-TV ATSC 1.0 contour that will gain over-the-air interference protected access to

WCCT-TV's ATSC 1.0 service due to the simulcasting arrangement is 164,418 people

- The result of the ATSC 1.0 simulcast arrangement is that 96.68% of the WCCT-TV ATSC 1.0 population will continue to have over-the-air access to WCCT-TV's ATSC 1.0 service as hosted on WTIC-TV. The proposed arrangement thus meets the 95% retention required for expedited processing.

Pursuant to §73.3801(c) of FCC Rules, full power broadcasters that elect temporarily to relocate their ATSC 1.0 signal to the facilities of a host station for purposes of deploying ATSC 3.0 service must continue to cover the station's entire community of license with the ATSC 1.0 simulcast signal and must be assigned to the same Designated Market Area (DMA) as the originating station. The attached exhibit demonstrates that the WTIC-TV ATSC 1.0 "host" station will completely subsume WCCT-TV's community of license of Waterbury, CT with a 48.0 dBuV/m principal community contour. As demonstrated, the proposed WTIC-TV "host" facility operating with an ATSC 1.0 signal and sharing the frequency with the WCCT-TV ATSC 1.0 "tenant" station fully satisfies the FCC rules specified in §73.3801 and the application should therefore be granted with expedited processing in accordance with the streamlined 1-step process specified in the rules.

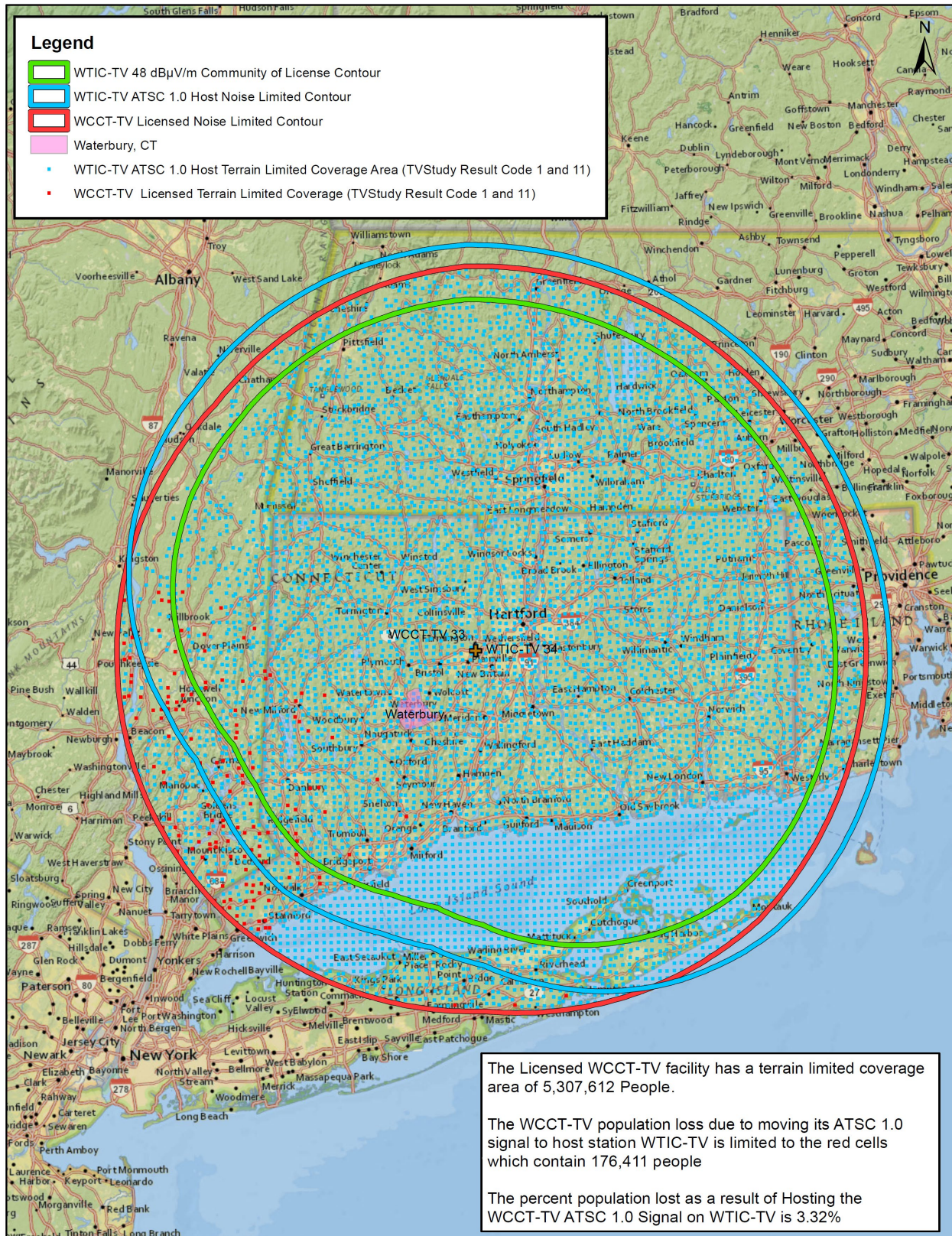
CERTIFICATION

The foregoing statement and the report regarding the engineering work are true and correct to the best of my knowledge. Executed September 21, 2021

Kessler and Gehman Associates, Inc.



Ryan Wilhour
Consulting Engineer



Attachment 2

MULTICAST HOST POPULATION COVERAGE ANALYSIS

Kessler and Gehman Associates Inc. has been retained by TEGNA Inc. (“TEGNA”), on behalf of its subsidiary TEGNA Broadcast Holdings, LLC, licensee of television station WCCT-TV, to analyze the population loss and gain when hosting certain ATSC 1.0 multicast operations through WFSB-TV and WTNH-TV. In connection with its planned conversion of WCCT-TV to ATSC 3.0 operation, and in order to preserve WCCT-TV’s ability to continue offering its multicast channels in ATSC 1.0 format, TEGNA entered into channel sharing arrangements with WFSB-TV and WTNH-TV to serve as ATSC 1.0 hosts for WCCT-TV’s multicast channels. TEGNA subsequently filed a Special Temporary Authority (“STA”) request with the Commission for a multicast host authorization. This statement and analysis supplements the STA request with information regarding changes in the population with over-the-air access to WCCT-TV’s multicast channels under the proposed hosting arrangements.

Exhibits 1 and 2 were produced by running WCCT-TV¹, WFSB-TV² and WTNH-TV³ in TVStudy v2.2.5 to generate Geographical Information System (“GIS”) shape files using the “general-purpose study” option an unrestricted study area for post-production processing in Arcmap v10.8. The TVStudy output files “coverpts.shp” and “points.shp” are spatially merged to yield a single shape file and metadata table which contain both population and TVStudy signal propagation result codes. TVStudy result codes 1⁴ and 11⁵ are retained for coverage analysis while other resulting codes are filtered out. The WCCT-TV and multicast host station are processed as described above then overlaid in a single map and the union of the WCCT-TV and its host station’s noise limited contours are used to filter out all points that fall beyond the combined contours of the two stations. Using GIS techniques, the

¹ FCC File No.: 0000080031

² FCC File No.: 0000080043

³ FCC File No.: 0000056790

⁴ Interference-free service

⁵ Interference-free service, but encountered a warning flag

overlapping points from the two stations are spatially analyzed and classified as either a gain, lost, or no change and is then then summed for an aggregate population figure.

Exhibit 1 demonstrates the overlap of the WCCT-TV and WFSB-TV ATSC 1.0 coverage points within the union of the noise limited contours. Using WFSB-TV as WCCT-TV ATSC 1.0 multicast host, WCCT-TV experiences:

- 447,189 population reduction
- 109,761 population gain
- 4,860,423 people who are not affected by the action

Exhibit 2 demonstrates the overlap of the WCCT-TV and WTNH-TV ATSC 1.0 coverage points within the union of the noise limited contours. Using WTNH-TV as WCCT-TV ATSC 1.0 multicast host, WCCT-TV experiences:

- 459,219 population reduction
- 903,313 population gain
- 6,666,539 people who are not affected by the action

CERTIFICATION

The foregoing statement and the report regarding the engineering work are true and correct to the best of my knowledge. Executed October 1, 2021

Kessler and Gehman Associates, Inc.



Ryan Wilhour
Consulting Engineer

EXHIBIT 1 – WCCT-TV ATSC 1.0 MULTICAST HOSTED ON WFSB-TV

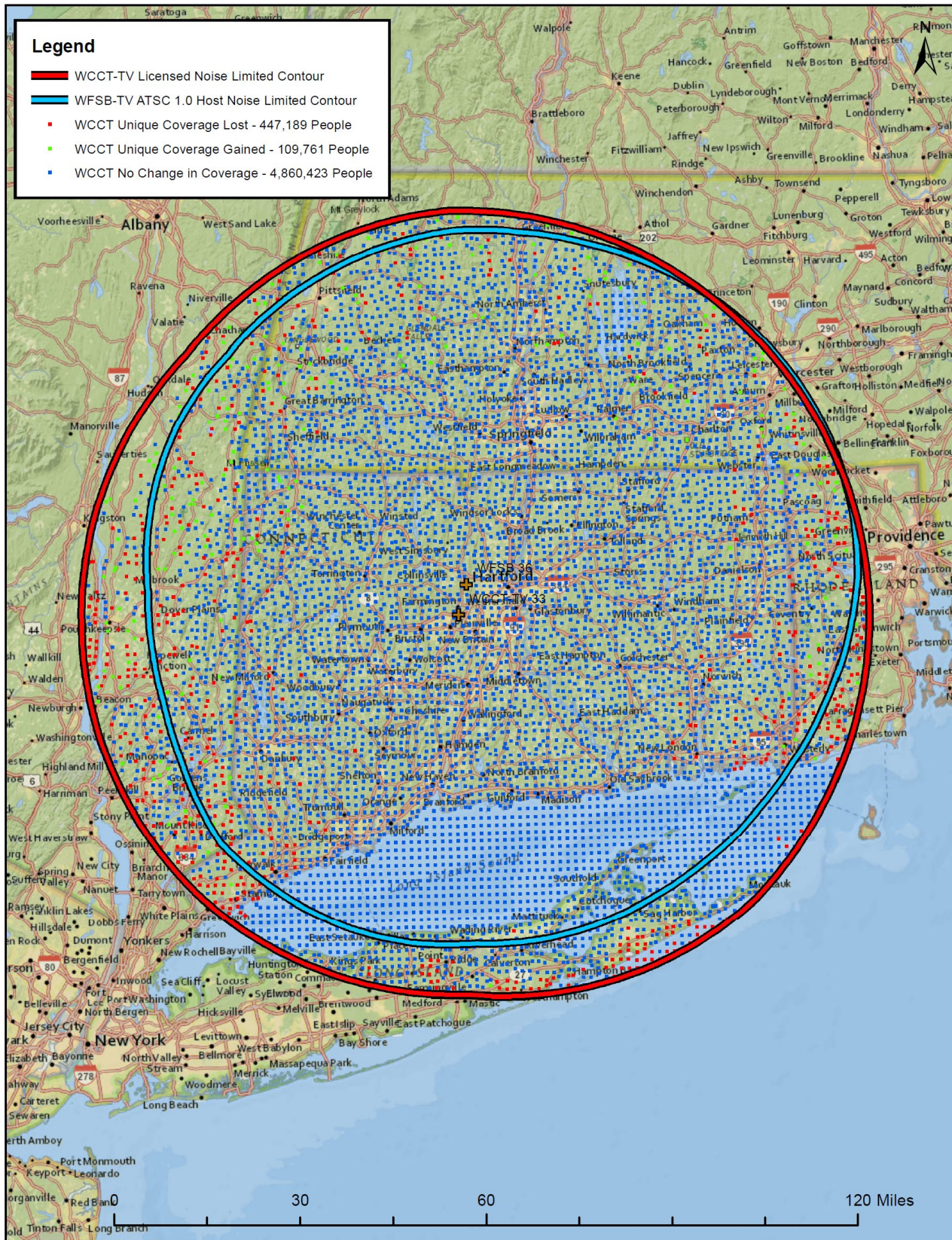


EXHIBIT 2 – WCCT-TV ATSC 1.0 MULTICAST HOSTED ON WTNH-TV

