

## ALLOCATION AND INTERFERENCE STUDY

PROPOSED WRAY-DT  
CHANNEL 42 - WILSON, NORTH CAROLINA  
[MODIFICATION OF BPCDT-19991101AFB]

The Commission allotted Channel 42 to WRAY-DT with a nominal ERP of 75.4 kw at 539 meters above average terrain. The instant application specifies an ERP of 873 kw at 539 meters. This is allowable under the FCC's *de minimis* standards with respect to various NTSC and DTV facilities.

In evaluating the interference effect of this proposal, we have relied upon the V-Soft Communications "Probe" computer program, which has been found generally to mimic the FCC's program. Changes in interference caused by WRAY-DT to other pertinent co-channel stations are tabulated in Exhibit D-2.

As indicated, the proposed WRAY-DT facility would not contribute more than two percent DTV interference to the service population of any affected NTSC or DTV station. In addition, this proposal does not result in any NTSC or DTV station receiving more than ten percent total DTV interference to viewers living within its present service area.

Therefore, this proposal meets the FCC's *de minimis* interference standards for DTV operations.

It should be noted that even with the proposed facility, the coverage of WRAY-DT will be inferior to at least one other station in the Raleigh-Durham market. WRAL-DT is allotted 1000 kw at 604 meters, whereas the instant proposal is for 873 kw at 539 meters.

## DE MINIMIS INTERFERENCE ANALYSIS

PROPOSED WRAY-DT  
CHANNEL 42 - WILSON, NORTH CAROLINA  
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NTSC FACILITIES

Call	City of License	Ch.	Grade B Population F(50,50)	Interference Losses (Population)								
				NTSC Only	NTSC & DTV Without WRAY-DT		Unmasked DTV		NTSC & DTV With WRAY-DT		Unmasked DTV	
WKFT	Fayetteville, NC	40	2,875,133	106,909	179,108	72,199	2.5	179,108	72,199	2.5	0	0
WTVI	Charlotte, NC	42	2,249,055	69,258	164,314	95,056	4.2	174,480	105,222	4.7	10,166	0.5
WHOA-LP(CP)	Raleigh, NC	44	90,002	0	18,152	18,152	20.2	18,152	18,152	20.2	0	0
WHOA-LP(App)	Raleigh, NC	44	750,565	0	1,254	1,254	0.2	1,254	1,254	0.2	0	0

DTV FACILITIES

Call	City of License	Ch.	NTSC/DTV <sup>3</sup> Grade B Pop. Longley-Rice	Interference Losses (Population)								
				NTSC Only	NTSC & DTV Without WRAY-DT		Unmasked		NTSC & DTV With WRAY-DT		Unmasked DTV	WRAY-DT Contribution % <sup>2</sup>
					WRAY-DT	% <sup>1</sup>	DTV	% <sup>1</sup>	WRAY-DT	% <sup>1</sup>		
WLXI-DT(CP)	Greensboro, NC	43	2,322,624	68,043	129,432	62,389	2.7	168,157	100,114	4.3	38,725	1.7
WLXI-DT(STA)	Greensboro, NC	43	1,633,075	12,528	28,931	16,403	1.0	35,572	23,044	1.4	6,641	0.4
WMSY-DT(CP)	Marion, VA	42	482,006	16,765	19,186	2,421	0.5	20,096	3,331	0.7	910	0.2
WMSY-DT(Alloc)	Marion, VA	42	403,977	8,405	9,439	1,034	0.3	10,655	2,250	0.6	1,216	0.3
WCVE-DT(RM)	Richmond, VA	42	1,306,351	0	19,805	19,805	1.5	29,397	29,397	2.2	9,592	0.7
WCVE-DT(CP)	Richmond, VA	42	1,467,044	99	30,302	30,203	2.1	52,340	52,241	3.6	22,038	1.5

<sup>1</sup> Cannot exceed 10%, under FCC de minimis interference standards.<sup>2</sup> Cannot exceed 2%, under FCC de minimis interference standards.<sup>3</sup> Larger of either NTSC Grade B population (with no DTV losses) or DTV Grade B population with all losses.