COMMERCE SPECTRUM MANAGEMENT ADVISORY COMMITTEE (CSMAC)

Working Group 2: 1755-1850 MHz
Law Enforcement Surveillance, Explosive Ordnance Disposal,
and other short distance links

FINAL REPORT
January 2013

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Executive Summary

This report has been produced as part of the ongoing analysis of ways to facilitate the implementation of commercial wireless broadband in the 1755-1850 MHz band.

The following summarizes the Working Group's recommendations for the Commerce Spectrum Management Advisory Committee (CSMAC) to provide to the National Telecommunications and Information Administration (NTIA). The focus of this working group is to develop a prioritized list of geographies according to industry implementation priorities for the potential relocation of video surveillance systems, first considering the 1755-1780 MHz band and second, the 1780-1850 MHz band.

The recommendation from this working group is for federal agencies to consider in developing their transition plans the list of 176 industry-defined Economic Areas (EAs) according to industry's geographic implementation priorities. While industry would prefer that federal relocation be based on these EAs, the WG2 participants acknowledged that the exact order in which agencies will be able to clear the EAs will be based on the federal agencies' operational requirements and may vary from the industry priority.

The ranked list of EAs begins on page 6.

I. Introduction

NTIA published a report in March 2012, which recommended that it is possible to repurpose the entire 1755-1850 MHz band for commercial mobile broadband systems though there are significant challenges yet to overcome. NTIA invited federal agencies with operations in the band to assess the feasibility of relocating from the 1755-1850 MHz band in ten years and to determine whether their systems could transition out of the 1755-1780 MHz band in five years, the conditions under which relocation could be accomplished, and the costs associated with the corresponding relocation. The assessments determined that some federal agencies could transition some systems out of the 1755-1780 MHz band within 5 years as an interim step to relocating out of the entire 95 MHz within the 10 year timeframe. The scope of the assessment didn't include an independent relocation or an indefinite sharing of just the 1755-1780 MHz portion of the band – NTIA's report concluded that "in order to ensure long-term approach to satisfying federal requirements and to take a significant step toward meeting the President's goal, NTIA didn't pursue the evaluation of the 1755-1780 MHz band as an exclusive solution."

This report provides the CSMAC Working Group 2 (WG2) recommended prioritized list of geographies for transition of federal video surveillance systems according to industry implementation priorities, first considering the 1755-1780 MHz band and second, the 1780-1850 MHz band. WG2 did not assess the feasibility of federal agencies' ability to transition systems out of the band according to the industry implementation priority. This recommended priority list will serve as input to affected federal agencies with video surveillance operations in this band, to consider as they develop their transition plans to relocate out of the spectrum, if it is identified for auction and an auction date is established by the FCC.

II. Background

The NTIA March 2012 report identified three types of video systems operating in the 1755-1850 MHz band: mobile law enforcement; fixed or transportable high resolution; and land robotics. For the purpose of this WG2 report, the mobile law enforcement and fixed/transportable high resolution video surveillance systems are include together as Law Enforcement (LE) video surveillance. Further, in this report, video surveillance generally refers to:

- **LE Video Surveillance Systems.** Federal LE agencies maintain and conduct authorized low-power video surveillance operations in the 1755-1850 MHz band. These operations include mobile, fixed or transportable high resolution, and transportable data links. The video obtained during these investigations provides evidence essential for criminal investigations and administrative hearings, and ensures rapid response support to undercover officers and agents. The devices

used in support of the video surveillance operations may operate in any part of the 1755-1850 MHz band, at any location, at any time. In addition, operations may use portable/body-worn devices, mobile, transportable, or a combination of these surveillance systems. Therefore, devices must be lightweight, easily assembled, and concealable. They also must avoid electronic detection to ensure officer/agent safety and the integrity of the surveillance.

- **Land Robotic Systems**. Agencies operate land robotic video systems in real world situations and training exercises to maintain operational readiness. These systems, employed on robotic devices, reduce personnel "risk to life" during explosive ordnance demolition or disposal and other uses. Explosive ordnance disposal operations use a video link between a remote-controlled robot and the command site to enable the operator to provide command and control for the robot and, at the same time, monitor the disposal operation. The 1755-1850 MHz band meets the high mobility and high-path reliability requirements for these systems.

III. Scope

The scope of the CSMAC WG2 is to develop a prioritized list of geographic areas according to industry implementation priorities, first considering the 1755-1780 MHz band and second, the 1780-1850 MHz band for the potential transition of video surveillance systems.

Video surveillance operations are conducted by DHS*, DOD*, DOE, DOJ*, DOI*, HHS, HUD*, OPM*, Treasury*, VA, USAID, USCP, and the USPS.[1] An asterisk (*) denotes the agencies that participated in CSMAC WG2.

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[1]U.S. Department of Homeland Security*
U.S. Department of Defense*
U.S. Department of Energy
U.S. Department of Justice*
U.S. Department of the Interior*
U.S. Department of Health and Human Services
U.S. Department of Housing and Urban Development*
U.S. Department of the Treasury*
U.S. Department of Veterans Affairs
Office of Personnel Management*
U.S. Agency for International Development
U.S. Capitol Police
U.S. Postal Service

IV. Recommendation

Currently, agencies with video surveillance systems in the 1755-1850 MHz band plan to transition operations from the 1755-1780 MHz band within five years, once funding and comparable spectrum is available. Their goal is to assist NTIA in meeting the President's 500 MHz target by relocating operations out of the entire 1755-1850 MHz band in ten years.

The recommended prioritized list of geographies according to industry implementation priorities, first considering the 1755-1780 MHz band and second, the 1780-1850 MHz band is:

A. Prioritized List of Geographies

	Economic Area	Major Economic Area	Regional Economic Area Groupings	Ranking
10	(NYC-Long Is. NY-NJ-CT-PA-MA-VT)	2 (New York City)	1 (Northeast)	1
160	(LA-Riverside-Orange Cnty CA-AZ)	44 (Los Angeles-San Diego)	6 (West)	2
64	(Chicago-Gary-Kenosha IL-IN-WI)	18 (Chicago)	3 (Great Lakes)	3
131	(Houston-Galveston-Brazoria TX)	31 (Houston)	5 (Central)	4
31	(Miami-Fort Lauderdale FL)	11 (Miami)	2 (Southeast)	5
163	(San Fran.-Oakland-San Jose CA)	43 (San Francisco-Oakland-San Jose)	6 (West)	6
158	(Phoenix-Mesa AZ-NM)	40 (Phoenix)	5 (Central)	7
127	(Dallas-Fort Worth TX-AR-OK)	32 (Dallas-Fort Worth)	5 (Central)	8
12	(Phil.-Atl. City PA-NJ-DE-MD)	4 (Philadelphia)	1 (Northeast)	9
161	(San Diego CA)	44 (Los Angeles-San Diego)	6 (West)	10
57	(Detroit-Ann Arbor-Flint MI)	16 (Detroit)	3 (Great Lakes)	11
3	(Boston-Worcester MA-NH-RI-VT)	1 (Northeast)	1 (Northeast)	12
55	(Cleveland-Akron OH-PA)	15 (Cleveland)	3 (Great Lakes)	13
30	(Orlando FL)	10 (Tampa-St. Petersburg-Orlando)	2 (Southeast)	14
13	(Wash.-Balt. DC-MD-VA-WV-PA)	5 (Washington)	2 (Southeast)	15
170	(Seattle-Tacoma-Bremerton WA)	46 (Seattle)	6 (West)	16
34	(Tampa-St. Petersburg FL)	10 (Tampa-St. Petersburg-Orlando)	2 (Southeast)	17

	Economic Area	Major Economic Area	Regional Economic Area Groupings	Ranking
49	(Cincinnati-Hamilton OH-KY-IN)	13 (Cincinnati-Dayton)	3 (Great Lakes)	18
40	(Atlanta GA-AL-NC)	8 (Atlanta)	2 (Southeast)	19
53	(Pittsburgh PA-WV)	12 (Pittsburgh)	3 (Great Lakes)	20
134	(San Antonio TX)	38 (San Antonio)	5 (Central)	21
96	(St. Louis MO-IL)	30 (St. Louis)	4 (Mississippi Valley)	22
67	(Indianapolis IN-IL)	19 (Indianapolis)	3 (Great Lakes)	23
23	(Charlotte-Gastonia NC-SC)	7 (Charlotte-Greensboro-Greenville-Raleigh)	2 (Southeast)	24
63	(Milwaukee-Racine WI)	17 (Milwaukee)	3 (Great Lakes)	25
152	(Salt Lake City-Ogden UT-ID)	42 (Salt Lake City)	6 (West)	26
107	(Minneapolis-St. Paul MN-WI-IA)	20 (Minneapolis-St. Paul)	3 (Great Lakes)	27
130	(Austin-San Marcos TX)	32 (Dallas-Fort Worth)	5 (Central)	28
83	(New Orleans LA-MS)	27 (New Orleans-Baton Rouge)	4 (Mississippi Valley)	29
19	(Raleigh-Durham-Chapel Hill NC)	7 (Charlotte-Greensboro-Greenville-Raleigh)	2 (Southeast)	30
141	(Denver-Boulder CO-KS-NE)	33 (Denver)	5 (Central)	31
153	(Las Vegas NV-AZ-UT)	44 (Los Angeles-San Diego)	6 (West)	32
51	(Columbus OH)	14 (Columbus)	3 (Great Lakes)	33
29	(Jacksonville FL-GA)	9 (Jacksonville)	2 (Southeast)	34
162	(Fresno CA)	43 (San Francisco-Oakland-San Jose)	6 (West)	35
133	(McAllen-Edinburg-Mission TX)	38 (San Antonio)	5 (Central)	36
172	(Honolulu HI)	48 (Hawaii)	8 (Hawaii)	37
164	(Sacramento-Yolo CA)	43 (San Francisco-Oakland-San Jose)	6 (West)	38
125	(Oklahoma City OK)	37 (Oklahoma City)	5 (Central)	39
73	(Memphis TN-AR-MS-KY)	26 (Memphis-Jackson)	4 (Mississippi Valley)	40
70	(Louisville KY-IN)	23 (Louisville-Lexington-Evansville)	4 (Mississippi Valley)	41
71	(Nashville TN-KY)	25 (Nashville)	4 (Mississippi Valley)	42
99	(Kansas City MO-KS)	29 (Kansas City)	4 (Mississippi Valley)	43
20	(Norfolk-Virginia Beach VA-NC)	6 (Richmond)	2 (Southeast)	44
167	(Portland-Salem OR-WA)	45 (Portland)	6 (West)	45
8	(Buffalo-Niagara Falls NY-PA)	3 (Buffalo)	1 (Northeast)	46

	Economic Area	Major Economic Area	Regional Economic Area Groupings	Ranking
78	(Birmingham AL)	24 (Birmingham)	4 (Mississippi Valley)	47
174	(Puerto Rico-US Virgin Islands)	50 (Puerto Rico and U.S. Virgin Islands)	10 (Puerto Rico and U.S. Virgin Islands)	48
18	(Greensboro-Winston-Salem NC-VA)	7 (Charlotte-Greensboro-Greenville-Raleigh)	2 (Southeast)	49
32	(Fort Myers-Cape Coral FL)	11 (Miami)	2 (Southeast)	50
50	(Dayton-Springfield OH)	13 (Cincinnati-Dayton)	3 (Great Lakes)	51
159	(Tucson AZ)	40 (Phoenix)	5 (Central)	52
33	(Sarasota-Bradenton FL)	10 (Tampa-St. Petersburg-Orlando)	2 (Southeast)	53
118	(Omaha NE-IA-MO)	34 (Omaha)	5 (Central)	54
84	(Baton Rouge LA-MS)	27 (New Orleans-Baton Rouge)	4 (Mississippi Valley)	55
15	(Richmond-Petersburg VA)	6 (Richmond)	2 (Southeast)	56
41	(Greenville-Spartanburg SC-NC)	7 (Charlotte-Greensboro-Greenville-Raleigh)	2 (Southeast)	57
7	(Rochester NY-PA)	2 (New York City)	1 (Northeast)	58
157	(El Paso TX-NM)	39 (El Paso-Albuquerque)	5 (Central)	59
124	(Tulsa OK-KS)	36 (Tulsa)	5 (Central)	60
104	(Madison WI-IL-IA)	17 (Milwaukee)	3 (Great Lakes)	61
150	(Boise City ID-OR)	42 (Salt Lake City)	6 (West)	62
24	(Columbia SC)	7 (Charlotte-Greensboro-Greenville-Raleigh)	2 (Southeast)	63
90	(Little Rock AR)	28 (Little Rock)	4 (Mississippi Valley)	64
26	(Charleston-North Charleston SC)	7 (Charlotte-Greensboro-Greenville-Raleigh)	2 (Southeast)	65
44	(Knoxville TN)	22 (Knoxville)	4 (Mississippi Valley)	66
122	(Wichita KS-OK)	35 (Wichita)	4 (Mississippi Valley)	67
119	(Lincoln NE)	34 (Omaha)	5 (Central)	68
156	(Albuquerque NM-AZ)	39 (El Paso-Albuquerque)	5 (Central)	69
6	(Syracuse NY-PA)	2 (New York City)	1 (Northeast)	70
56	(Toledo OH)	16 (Detroit)	3 (Great Lakes)	71
100	(Des Moines IA-IL-MO)	21 (Des Moines-Quad Cities)	3 (Great Lakes)	72
25	(Wilmington NC-SC)	7 (Charlotte-Greensboro-Greenville-Raleigh)	2 (Southeast)	73
77	(Jackson MS-AL-LA)	26 (Memphis-Jackson)	4 (Mississippi Valley)	74
81	(Pensacola FL)	27 (New Orleans-Baton Rouge)	4 (Mississippi Valley)	75
5	(Albany-Schenectady-Troy NY)	2 (New York City)	1 (Northeast)	76

Economic Area		Major Economic Area	Regional Economic Area Groupings	Ranking
151	(Reno NV-CA)	43 (San Francisco-Oakland-San Jose)	6 (West)	77
59	(Green Bay WI-MI)	17 (Milwaukee)	3 (Great Lakes)	78
62	(Grand Rapids-Muskegon MI)	16 (Detroit)	3 (Great Lakes)	79
85	(Lafayette LA)	27 (New Orleans-Baton Rouge)	4 (Mississippi Valley)	80
80	(Mobile AL)	27 (New Orleans-Baton Rouge)	4 (Mississippi Valley)	81
166	(Eugene-Springfield OR-CA)	45 (Portland)	6 (West)	82
97	(Springfield IL-MO)	18 (Chicago)	3 (Great Lakes)	83
132	(Corpus Christi TX)	38 (San Antonio)	5 (Central)	84
21	(Greenville NC)	7 (Charlotte-Greensboro-Greenville-Raleigh)	2 (Southeast)	85
68	(Champaign-Urbana IL)	18 (Chicago)	3 (Great Lakes)	86
11	(Harrisburg-Lebanon-Carlisle PA)	4 (Philadelphia)	1 (Northeast)	87
94	(Springfield MO)	30 (St. Louis)	4 (Mississippi Valley)	88
35	(Tallahassee FL-GA)	9 (Jacksonville)	2 (Southeast)	89
92	(Fayetteville AR-MO-OK)	28 (Little Rock)	4 (Mississippi Valley)	90
28	(Savannah GA-SC)	8 (Atlanta)	2 (Southeast)	91
98	(Columbia MO)	30 (St. Louis)	4 (Mississippi Valley)	92
74	(Huntsville AL-TN)	24 (Birmingham)	4 (Mississippi Valley)	93
66	(Fort Wayne IN)	18 (Chicago)	3 (Great Lakes)	94
82	(Biloxi-Gulfport-Pascagoula MS)	27 (New Orleans-Baton Rouge)	4 (Mississippi Valley)	95
140	(Pueblo CO-NM)	33 (Denver)	5 (Central)	96
43	(Chattanooga TN-GA)	8 (Atlanta)	2 (Southeast)	97
88	(Shreveport-Bossier City LA-AR)	32 (Dallas-Fort Worth)	5 (Central)	98
65	(Elkhart-Goshen IN-MI)	18 (Chicago)	3 (Great Lakes)	99
69	(Evansville-Henderson IN-KY-IL)	23 (Louisville-Lexington-Evansville)	4 (Mississippi Valley)	100
2	(Portland ME)	1 (Northeast)	1 (Northeast)	101
4	(Burlington VT-NY)	2 (New York City)	1 (Northeast)	102
22	(Fayetteville NC)	7 (Charlotte-Greensboro-Greenville-Raleigh)	2 (Southeast)	103
87	(Beaumont-Port Arthur TX)	31 (Houston)	5 (Central)	104
60	(Appleton-Oshkosh-Neenah WI)	17 (Milwaukee)	3 (Great Lakes)	105

Economic Area		**Major Economic Area**	**Regional Economic Area Groupings**	**Ranking**
39	(Columbus GA-AL)	8 (Atlanta)	2 (Southeast)	106
93	(Joplin MO-KS-OK)	29 (Kansas City)	4 (Mississippi Valley)	107
139	(Santa Fe NM)	39 (El Paso-Albuquerque)	5 (Central)	108
147	(Spokane WA-ID)	41 (Spokane-Billings)	6 (West)	109
135	(Odessa-Midland TX)	32 (Dallas-Fort Worth)	5 (Central)	110
89	(Monroe LA)	32 (Dallas-Fort Worth)	5 (Central)	111
27	(Augusta-Aiken GA-SC)	8 (Atlanta)	2 (Southeast)	112
101	(Peoria-Pekin IL)	18 (Chicago)	3 (Great Lakes)	113
79	(Montgomery AL)	24 (Birmingham)	4 (Mississippi Valley)	114
42	(Asheville NC)	7 (Charlotte-Greensboro-Greenville-Raleigh)	2 (Southeast)	115
47	(Lexington KY-TN-VA-WV)	23 (Louisville-Lexington-Evansville)	4 (Mississippi Valley)	116
46	(Hickory-Morganton NC-TN)	7 (Charlotte-Greensboro-Greenville-Raleigh)	4 (Mississippi Valley)	117
136	(Hobbs NM-TX)	39 (El Paso-Albuquerque)	5 (Central)	118
154	(Flagstaff AZ-UT)	40 (Phoenix)	5 (Central)	119
137	(Lubbock TX)	32 (Dallas-Fort Worth)	5 (Central)	120
54	(Erie PA)	15 (Cleveland)	3 (Great Lakes)	121
14	(Salisbury MD-DE-VA)	5 (Washington)	2 (Southeast)	122
38	(Macon GA)	8 (Atlanta)	2 (Southeast)	123
86	(Lake Charles LA)	31 (Houston)	5 (Central)	124
129	(San Angelo TX)	32 (Dallas-Fort Worth)	5 (Central)	125
148	(Idaho Falls ID-WY)	42 (Salt Lake City)	6 (West)	126
1	(Bangor ME)	1 (Northeast)	1 (Northeast)	127
123	(Topeka KS)	29 (Kansas City)	5 (Central)	128
103	(Cedar Rapids IA)	21 (Des Moines-Quad Cities)	3 (Great Lakes)	129
106	(Rochester MN-IA-WI)	20 (Minneapolis-St. Paul)	3 (Great Lakes)	130
105	(La Crosse WI-MN)	17 (Milwaukee)	3 (Great Lakes)	131
138	(Amarillo TX-NM)	32 (Dallas-Fort Worth)	5 (Central)	132
165	(Redding CA-OR)	43 (San Francisco-Oakland-San Jose)	6 (West)	133
45	(Johnson City-Kingsport TN-VA)	22 (Knoxville)	4 (Mississippi Valley)	134
36	(Dothan AL-FL-GA)	24 (Birmingham)	4 (Mississippi Valley)	135
9	(State College PA)	12 (Pittsburgh)	3 (Great Lakes)	136
37	(Albany GA)	8 (Atlanta)	2 (Southeast)	137
17	(Roanoke VA-NC-WV)	6 (Richmond)	2 (Southeast)	138
169	(Richland-Kennewick-Pasco	46 (Seattle)	6 (West)	139

	Economic Area	Major Economic Area	Regional Economic Area Groupings	Ranking
	WA)			
75	(Tupelo MS-AL-TN)	26 (Memphis-Jackson)	4 (Mississippi Valley)	140
61	(Traverse City MI)	16 (Detroit)	3 (Great Lakes)	141
91	(Fort Smith AR-OK)	28 (Little Rock)	4 (Mississippi Valley)	142
109	(Duluth-Superior MN-WI)	20 (Minneapolis-St. Paul)	3 (Great Lakes)	143
128	(Abilene TX)	32 (Dallas-Fort Worth)	5 (Central)	144
76	(Greenville MS)	26 (Memphis-Jackson)	4 (Mississippi Valley)	145
143	(Casper WY-ID-UT)	33 (Denver)	5 (Central)	146
149	(Twin Falls ID)	42 (Salt Lake City)	6 (West)	147
126	(Western Oklahoma OK)	37 (Oklahoma City)	5 (Central)	148
16	(Staunton VA-WV)	6 (Richmond)	2 (Southeast)	149
48	(Charleston WV-KY-OH)	13 (Cincinnati-Dayton)	3 (Great Lakes)	150
116	(Sioux Falls SD-IA-MN-NE)	20 (Minneapolis-St. Paul)	3 (Great Lakes)	151
113	(Fargo-Moorhead ND-MN)	20 (Minneapolis-St. Paul)	3 (Great Lakes)	152
95	(Jonesboro AR-MO)	28 (Little Rock)	4 (Mississippi Valley)	153
108	(Wausau WI)	17 (Milwaukee)	3 (Great Lakes)	154
102	(Davenport-Moline IA-IL)	21 (Des Moines-Quad Cities)	3 (Great Lakes)	155
142	(Scottsbluff NE-WY)	33 (Denver)	5 (Central)	156
52	(Wheeling WV-OH)	12 (Pittsburgh)	3 (Great Lakes)	157
144	(Billings MT-WY)	41 (Spokane-Billings)	6 (West)	158
168	(Pendleton OR-WA)	41 (Spokane-Billings)	6 (West)	159
115	(Rapid City SD-MT-NE-ND)	33 (Denver)	5 (Central)	160
110	(Grand Forks ND-MN)	20 (Minneapolis-St. Paul)	3 (Great Lakes)	161
117	(Sioux City IA-NE-SD)	21 (Des Moines-Quad Cities)	3 (Great Lakes)	162
155	(Farmington NM-CO)	39 (El Paso-Albuquerque)	5 (Central)	163
112	(Bismarck ND-MT-SD)	20 (Minneapolis-St. Paul)	3 (Great Lakes)	164
72	(Paducah KY-IL)	23 (Louisville-Lexington-Evansville)	4 (Mississippi Valley)	165
171	(Anchorage AK)	47 (Alaska)	7 (Alaska)	166
120	(Grand Island NE)	34 (Omaha)	5 (Central)	167
146	(Missoula MT)	41 (Spokane-Billings)	6 (West)	168
58	(Northern Michigan MI)	16 (Detroit)	3 (Great Lakes)	169
111	(Minot ND)	20 (Minneapolis-St. Paul)	3 (Great Lakes)	170
114	(Aberdeen SD)	20 (Minneapolis-St. Paul)	3 (Great Lakes)	171
145	(Great Falls MT)	41 (Spokane-Billings)	6 (West)	172
121	(North Platte NE-CO)	34 (Omaha)	5 (Central)	173
173	(Guam-Northern Mariana	49 (Guam and the Northern	9 (Guam and the	174

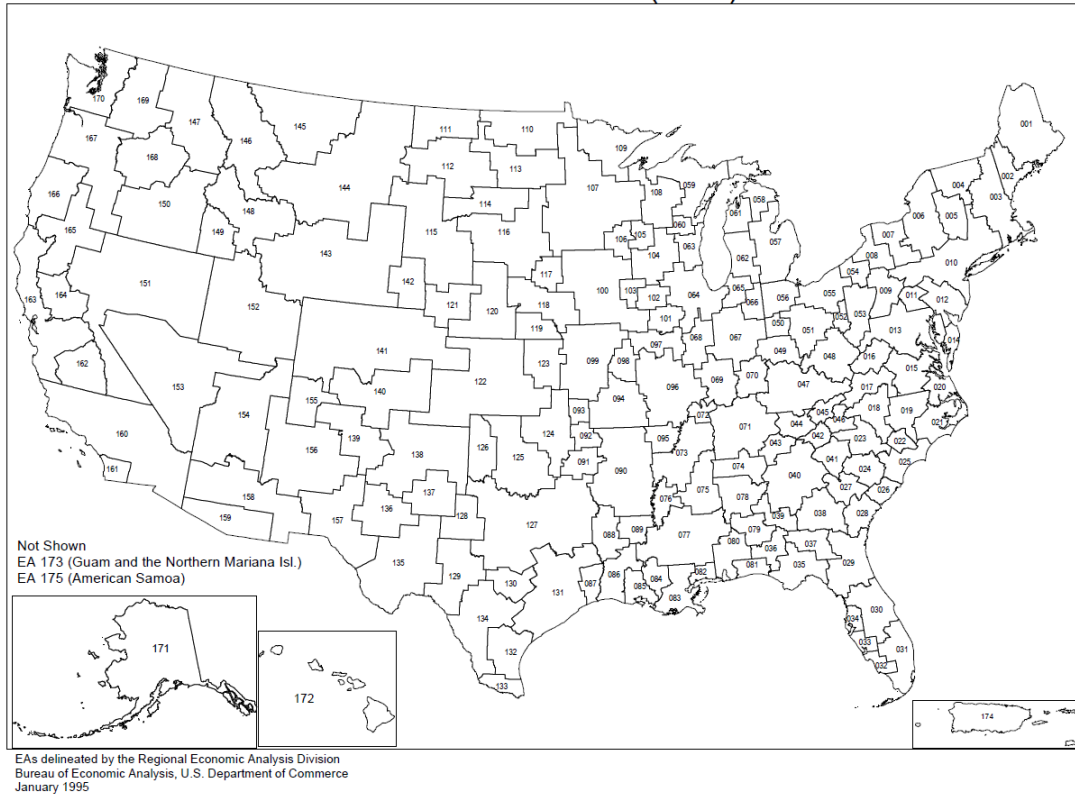|	Economic Area	Major Economic Area	Regional Economic Area Groupings	Ranking
	Islands)	Mariana Islands)	Northern Mariana Islands)	
175	(American Samoa)	51 (American Samoa)	11 (American Samoa)	175
176	(Gulf of Mexico)	52 (Gulf of Mexico)	12 (Gulf of Mexico)	176

B. Geographical Units

Economic Area (EA), of which there are 176 licenses necessary for nationwide coverage, was chosen by the CSMAC WG2 sub-working group comprised of industry participants as the preferred geographical unit for developing the prioritized list. The decision to use EAs considered the following facts and assumptions:

- The industry implementation priority list developed by theWG2 subgroup will be shared with other CSMAC working groups.
- Different federal agency system types and operational requirements will lend themselves to different clearing geographies and timelines.
- The geographic unit chosen is based on its probability of alignment with likely FCC license areas for 1755+, i.e., similar to AWS-1, although the FCC may choose to use license areas of various sizes.
- While Commercial Mobile Radio Service (CMRS) geographic units based on license areas makes sense and have defined geographic boundaries, there will be instances where agencies will clear larger areas.

While industry would prefer federal relocation based on EAs in the order suggested, the sub-working group understands that the exact order in which agencies will actually be able to clear the EAs will be based on operational requirements and may vary from the industry priority, and in some cases operational needs may mandate clearing larger geographic areas. In general, the prioritized list of EAs will serve as input for consideration as the transition plans are being developed by the federal agencies. After a potential spectrum auction, the schedule for when specific operations will be cleared from specific geographies will be coordinated with the auction winner(s) based on the transition plans.

Considering that the selected geographical areas will inform NTIA and other working groups, additional consideration may be necessary.

Economic Areas (EAs)

Not Shown
EA 173 (Guam and the Northern Mariana Isl.)
EA 175 (American Samoa)

EAs delineated by the Regional Economic Analysis Division
Bureau of Economic Analysis, U.S. Department of Commerce
January 1995

V. Assumptions and other Pre-conditions for Relocation;

All affected agencies can transition video surveillance systems out of the 1755-1780 MHz band within five years and anticipate relocating out of the entire 1755-1850 MHz band in ten years or less, once funding is available and assuming comparable spectrum is provided. Comparable spectrum to relocate federal operations is a requirement for affected agencies to vacate the entire band or a portion thereof; however, this report does not identify specific comparable bands, since this will be addressed through other interagency processes stewarded by NTIA and the FCC.

Assumptions for relocation are already listed in the NTIA reports posted at:
http://www.ntia.doc.gov/report/2012/assessment-viability-accommodating-wireless-broadband-1755-1850-mhz-band .

If the assumptions and preconditions listed in those reports do not occur, the overall relocation effort may be affected, potentially including increased costs, delay of the relocation timeframe, and/or result in the need by some agencies to retain some amount of spectrum in the 1755-1850 MHz band until comparable spectrum can be found.

VI.   Appendix A: Participation List for WG2

Co-Chair, Richard von Bostel	U.S. Department of Justice
Co-Chair , Mark Racek	Ericsson
Alan Wilson	Harris Corp.
Albert Rolek	Treasury Inspector General for Tax Administration
Amahl. K. Williams, CDR	Navy/USMC – EOD Technical SME
Art Deleon, CWO4	U.S. Marine Corps – Spectrum Management Lead (HQUSMC/C4)
Bill Edwards	ATF
Bradley Smith, Capt	USAF AFSMO/XP
Brian Scarpelli	Telecommunications Industry Association (TIA)
Bryan L. Wright	Department of the Interior
Carol Swan	CIV USAF AFSMO
Chuck Powers	Motorola
Colin M. Alberts	FREEDOM TECHNOLOGIES
David Borth	CSMAC
David Campbell	DHS
David G. Steer	Research In Motion
David Gurney	Motorola Solutions
David Hughes	Plateau Telecommunications
Donald E. Rodgers	FBI
Donald Reese, COL	Air Force – Spectrum Management Lead (AFSMO)
Doug Sharp	Oceus Networks
Earl Newell	FBI
Ed Smith	DHS
Eric Hagerson	T-Mobile
Frank Jager	Verizon
Gary Patrick	NTIA, Office of Spectrum Mgmt/Strategic Planning Division
Gary Scheer	FBI
Jim Hollansworth	NASA
James Hunt	Navy Marine Corps Spectrum Center (NMSC)
James Norton	General Dynamics
Janice Obuchowski	FREEDOM TECHNOLOGIES
Jill Rabach	Sprint Nextel
Jim Snider	iSolon
John Cornicelli	DHS
John Quinlan	OMB

Joseph Cramer	The Boeing Company; Regional Director; Regulatory Policy, International Spectrum Management
Julio Laguardia	DOJ
Kelly Oliver	ICE
Kumar Balachandran	Ericsson
Larry Feast	DISA/DSO
Lily Zeleke	DoD CIO
Lori Winn, Lt Col	Joint Staff
Lynna McGrath	DoD CIO
Mark Gibson	Comsearch
Mark Johnson	U.S. Navy – Spectrum Management Lead (OPNAV/N2N6)
Mark S. Adams	Northrop Grumman
Mark Uncapher	Telecommunications Industry Association (TIA)
Mathew McIntyre	USSS
Michael Bernard	Air Force – EOD Robotics SME7CXR
Mike Chartier	Intel
Mike Cross	DEA
MilindBuddhikot, Dr.	Alcatel-Lucent
Paul Frew	RIM
Pierre Missud	ATDI Inc.; President
Ralph Robles	Treasury
Randolph A Peterson	USMC-CIV
Randolph S. Wardle, LTC	Joint Staff, J6 Spectrum Management
Rangam Subramanian	Idaho National Labs
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Rich Orsulak	NTIA
Robert Johnk	ITS
Robert Kubik	Samsung
Robert Pavlak	FCC
Ronald Kindelberger	Sentel Corporation
Sam Pirrone	Army - PEO Ground Combat Systems (Robotics) SME
Scott Jackson	NTIA
StevanJovancevic	Army – Spectrum Management Office (ASMO)
Thomas Dombrowsky Jr.	Wiley Rein
Thomas Sullivan	ASRCARTS
Todd Pressley	Oceus Networks
Tom Kidd	Department of the Navy Spectrum Mgmt Lead (DON CIO)
Tom Birmingham	Internal Revenue Service – Criminal Investigations
VandanaTandon	Sprint