

***Federal Agency  
Operations  
in 1755-1850 MHz***

Commerce Spectrum Management  
Advisory Committee

May 25, 2011



- **Fixed Point to Point**
- **Mobile Video Surveillance – Transitioning from 1710-1755 MHz. Final conversion to digital not yet complete as development efforts continue to work on size, battery, and heat issues. Analog systems still have very wide receiver bandwidths (18 MHz).**
- **High Resolution Surveillance Video Links – Nationwide as required**
- **Aeronautical Telemetry – Combined with 1435-1525, 2200-2290, and 2360-2390 MHz to provide adequate data to monitor aircraft and missile performance for safety, and system test and development**
- **Remote Land Mobile Robotics - Training and domestic use as required**
- **Unmanned Aerial Vehicles and Systems – Expanding use for training but also domestic operations**

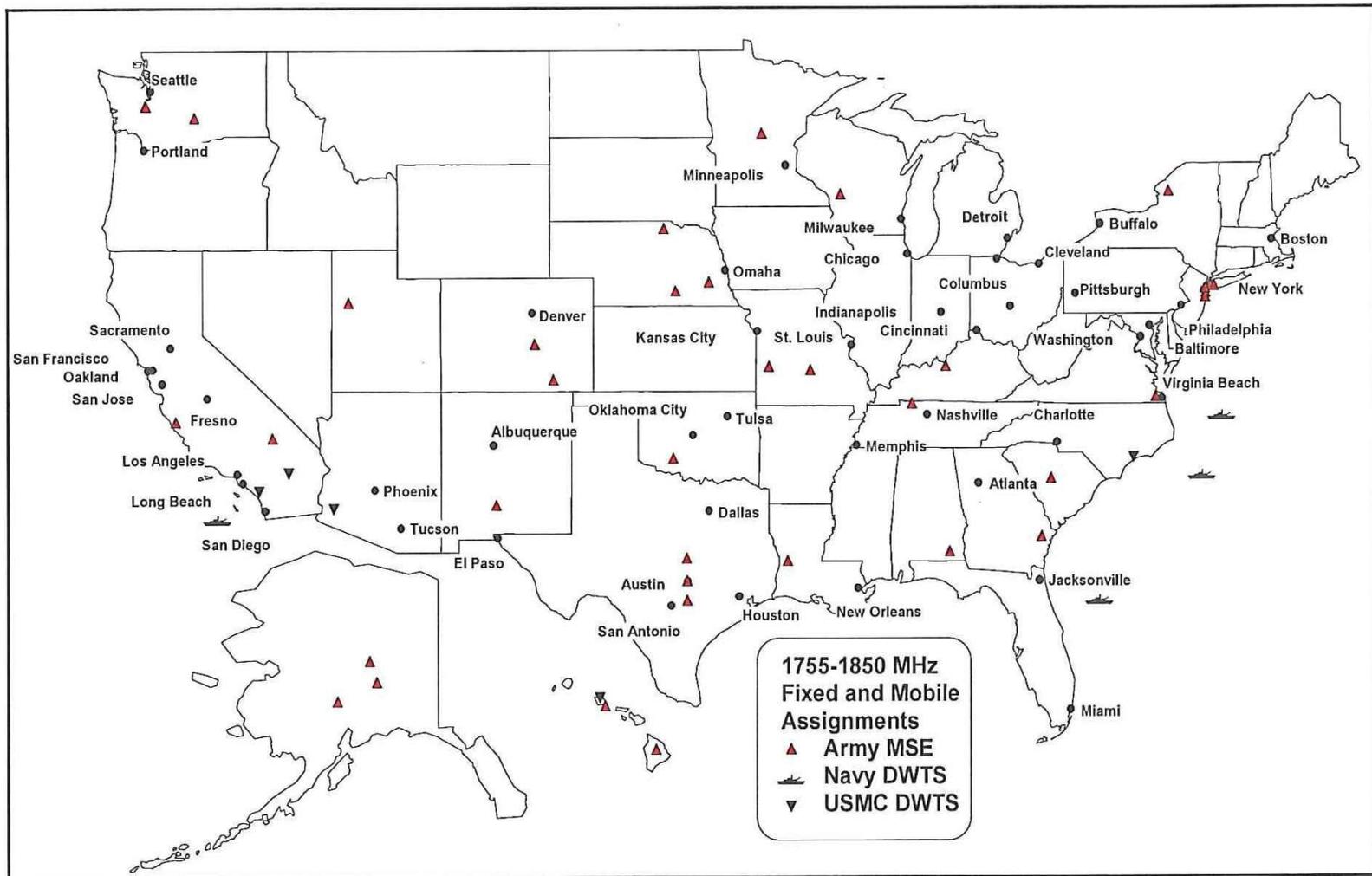


Figure 9. Concentrations of Fixed and Mobile Sites in the 1755-1850 MHz Band.

**Tactical Radio Relay – Requires 90 MHz up and down links (matched to 1300-1390 MHz. Many of the systems operate up to 2600 MHz. Some only operate up to 1850 MHz.**



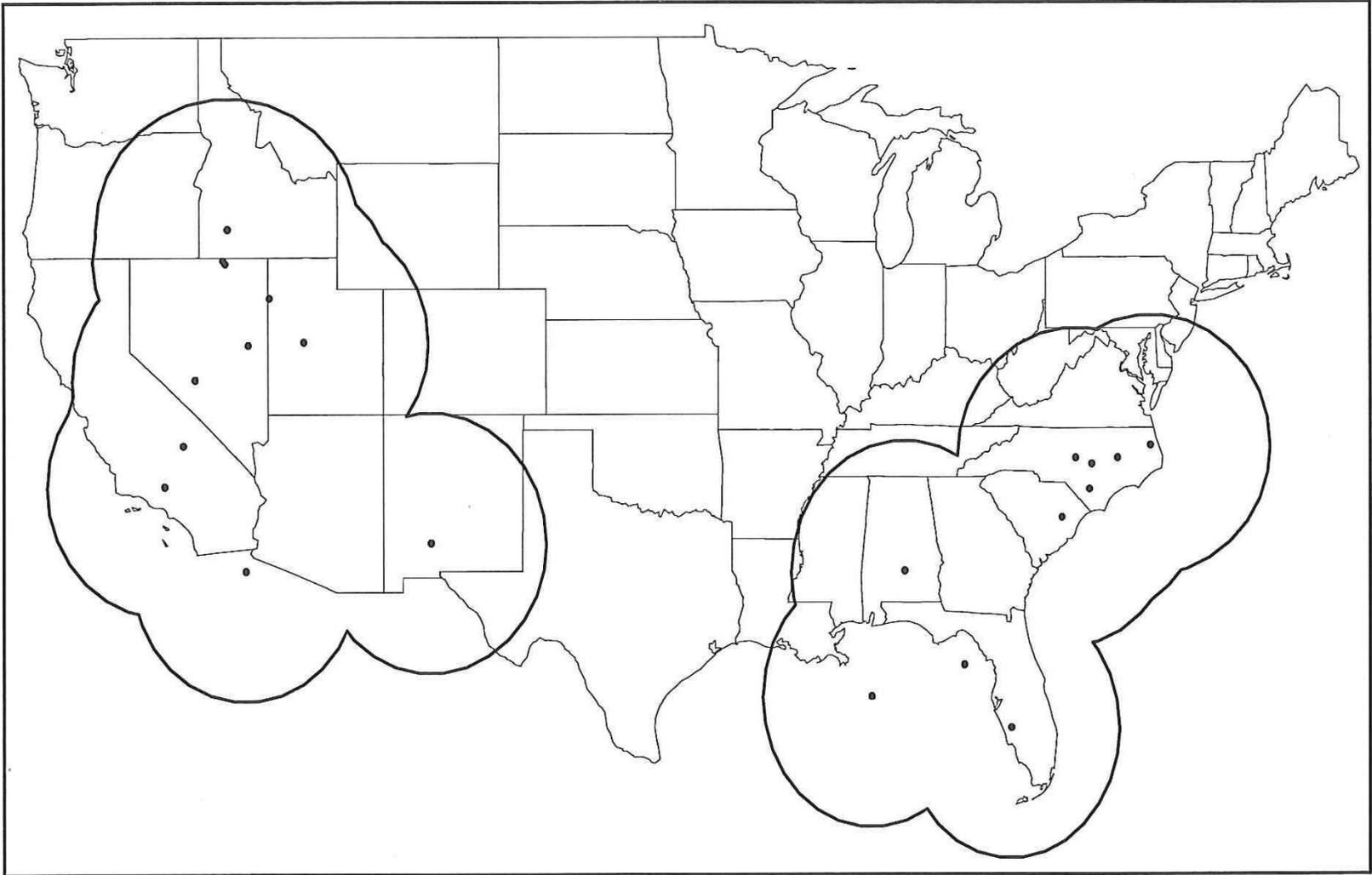


Figure 11. Line-of-Sight Distances from Precision Guided Munitions Operational Areas.

**Precision Guided Munitions – Operated at training ranges with aircraft potentially at high altitude.**

Satellite Control Uplinks – Communicate commands to GSO and NGSO satellites from 1761-1842 MHz in 4.004 MHz channels. Located at points on the east and west coasts and a few in the interior to maintain contact.

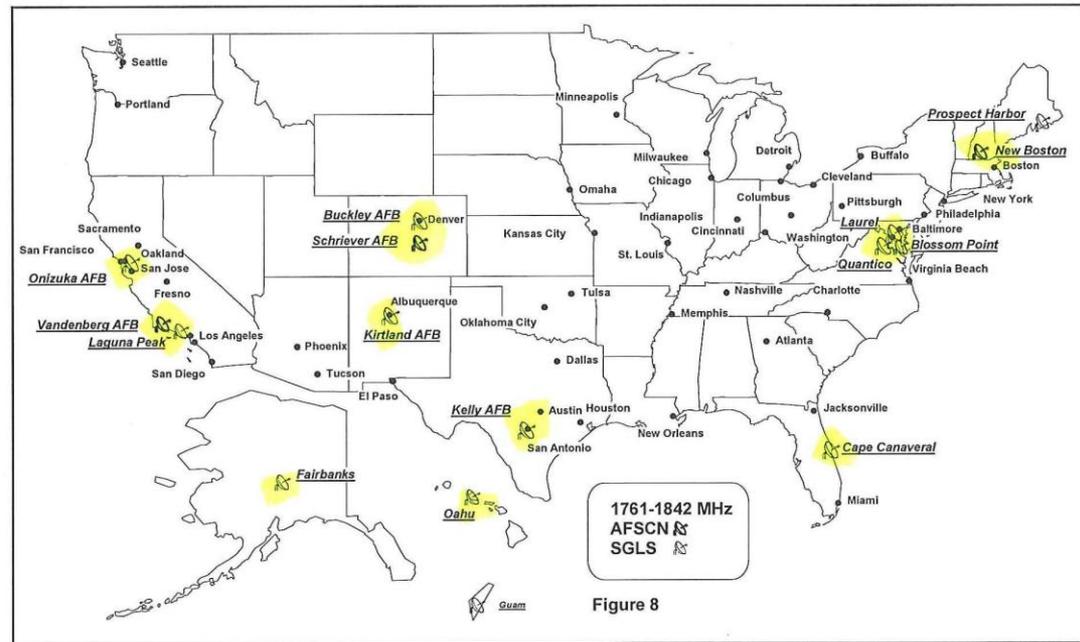


Figure 8. Satellite Control Network Sites.

**Satellites Supported.** The following is an unclassified summary of typical satellite systems supported by DOD.

**Unclassified Summary of Typical Satellites Supported by DOD**

Short Name	Orbit*	Short Name	Orbit*
USGCSS PH 2/3/3B	GEO	USGCSS PH5	GEO
FLTSATCOM	GEO	USOBO	GEO
MILSTAR	Inclined GEO	DMSP	Non-GEO
UFO	GEO	GPS	Non-GEO
Skynet (UK)	GEO	STS (Shuttle)	Non-GEO
NATO III/IV	GEO	GFO	Non-GEO
DSP		P-Series	Non-GEO
SBIRS (Planned)	GEO	USAPEX	Non-GEO
USGAE	GEO	OTF	Non-GEO
USGBS	GEO	Various R&D	Non-GEO (LEO, HEO)

\* Note: Geostationary Orbit (GEO), Highly Elliptical Orbit (HEO), Low Earth Orbit (LEO)

NTIA Special Publication 01-46

The Potential For Accommodating Third  
Generation Mobile Systems in the  
1710-1850 MHz band

<http://www.ntia.doc.gov/ntiahome/threeg/33001/3g33001.pdf>