



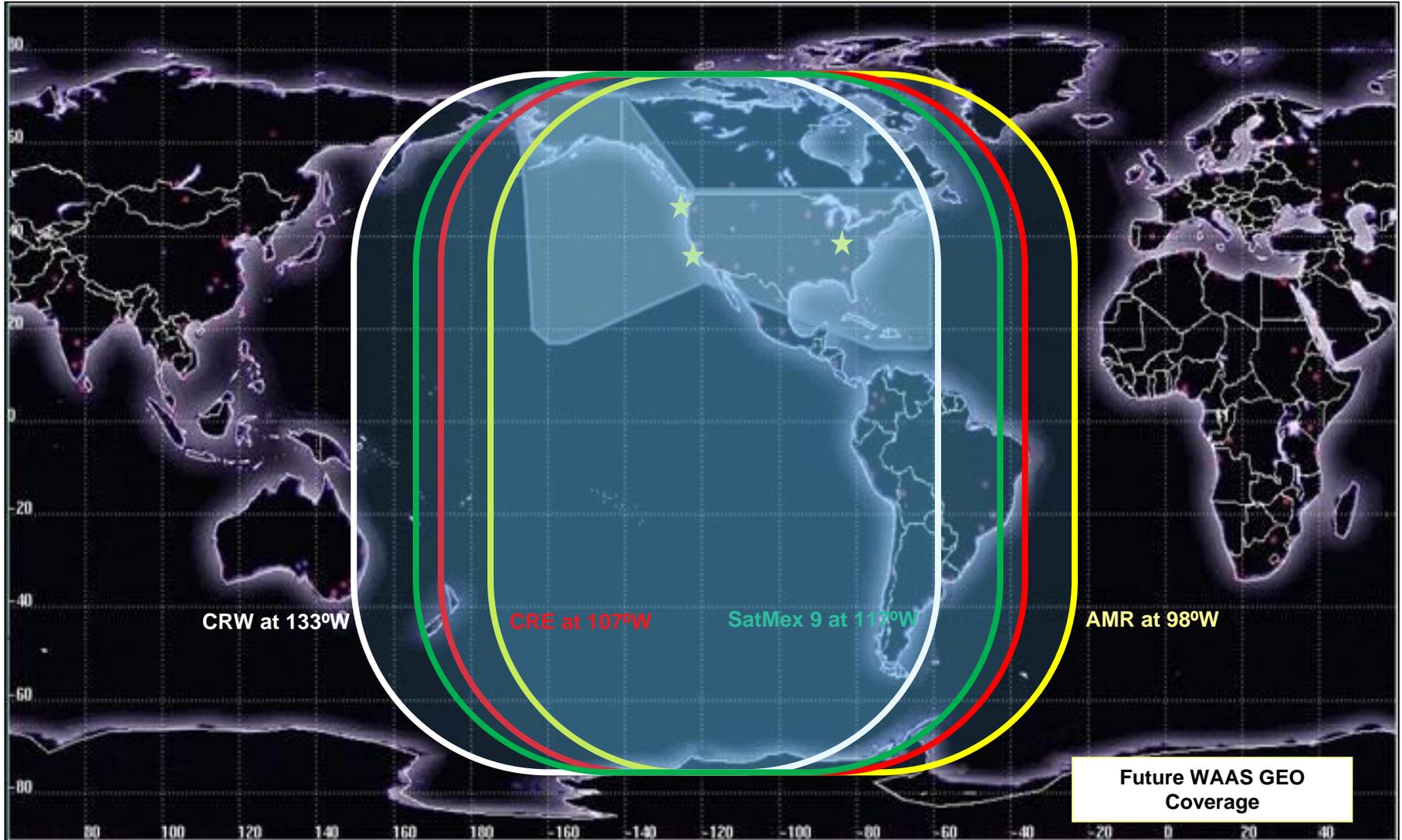
# ***Wide Area Augmentation System (WAAS) and NDGPS Update***

10<sup>th</sup> Meeting of the International  
Committee on GNSS  
Boulder, CO, U.S.

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*November 2015*



# WAAS GEO Footprints

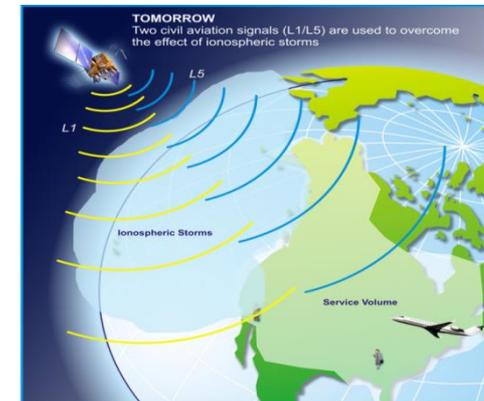
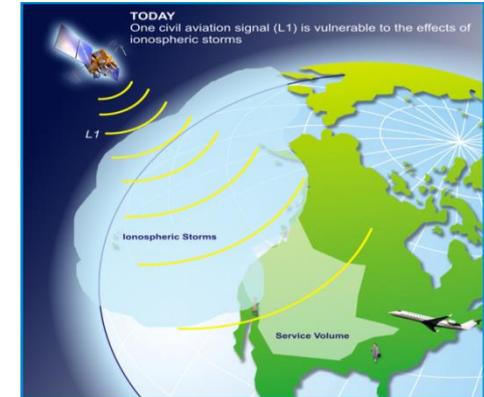




# WAAS Phase IV Dual Frequency Operations Status

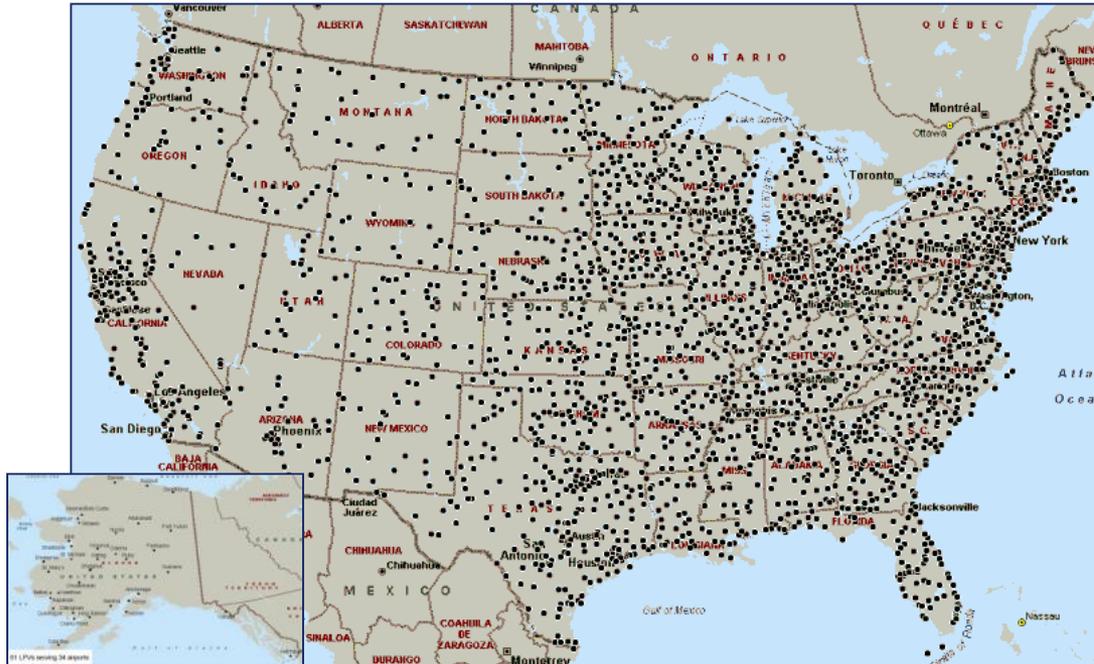


- Transition from use of L2 P(Y) to L5
  - Planned ‘Sunset’ of L2P(Y) is driver for transition
- Phase IV Segment 1 consists of 5 Releases
  - Release 1 (Processor Upgrades) currently on schedule to be complete by summer of 2017
  - Release 2 (GEO 5) on schedule for operational GEO by the end of CY2017
- Dual-Frequency Multi-constellation Capability (DFMC)
  - MOPS and SARPs development underway
- Advanced RAIM (ARAIM)
  - Concept definition underway to look at avionics centric approach for use of multi-constellation GNSS





# Procedures & Users Depending on WAAS



- Procedures

- As of October 15, 2015  
4,186 WAAS Procedures published
  - 3,590 LPV procedures
  - 596 LP procedures



- Approximately 85,500 WAAS equipped aircraft
- All classes of aircraft are served in all phases of flight
- Enabling technology for NextGen programs
  - Automatic Dependent Surveillance Broadcast (ADS-B)
  - Performance Based Navigation (PBN)





# *Future of Nationwide Differential GPS (NDGPS)*



- Current system utilizes 84 broadcast sites to provide positioning accuracy of 1-3 meters across 92% of CONUS
  - Few users of the NDGPS broadcast
  - USCG, DOT, and US Army Corps of Engineers Plans:
    - Retain NDGPS at 21 sites for single station near-shore coverage
    - Decommission 62 sites
    - One US Army Corps of Engineers (USACE) site to remain
  - Termination of NDGPS broadcast at 62 proposed sites planned for Jan. 15, 2016\*
- \* November 16, 2015: 90-day FRN comment period closes; Impact and alternative site use assessed



# Proposed NDGPS Coverage with 62 Sites Decommissioned

