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Crescenta Valley Town Council

April 16, 2015

Purpose: To engage in regional and cooperative planning and coordination of government services to establish a wide-area interoperability public safety communications network.

LA-RICS Overview

- Interoperable, mission-critical communications and data network for first responders
  - Major finding 9/11 commission report
- Support first responders in protecting 10 million residents across 4,000+ square miles
  - Places first responders at the core of our mission
- Governed by a single, JPA representing 71 cities, 2 school districts and 1 University

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The Need For Interoperability

- Improves operational efficiency of first and secondary responders
  - **Save lives, reduce property damage and minimize economic and social disruptions**
- Future of public safety voice and data communications is 700MHz
  - LA-RICS program establishes a viable plan for T-Band migration
  - With LTE, LA-RICS provides secure 4G data network for high-speed video & data access
- Interoperability in Los Angeles County
  - 81 public safety agencies
    - 34,000 first responders
  - Inclusion of 17,000 secondary responders
  - Ability to replace 40 different localized public safety communications systems

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LA-RICS Benefits to Public Safety

- Long Term Evolution (LTE)
  - Data information is critical for the efficiency of public safety
  - Broadband vision “To provide emergency responders with the first nationwide, high-speed, wireless broadband network dedicated to public safety”
  - LTE provides a secure data network (4G) technology to provide high-speed video and data access
    - Live surveillance camera for Search & Rescue
    - Body cameras for Law Enforcement & Fire
    - Conditions of victims trapped in vehicles/buildings
    - In-field video conferencing EMS & hospital
  - Exclusive to public safety response

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LA-RICS Benefits to Community

- Improve citizen and responder safety
- Increase efficiency and effectiveness of emergency response
- Improves situational awareness, decision-making and citizen heath and safety
- Public Safety personnel using the network will be able to share applications, access databases, and provide better informed responses to incidents through integrated communications.
- Essential to improving the quality of service and quality of life within communities

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Public Safety Broadband Network (PSBN)

- Funding: Broadband Technology Opportunity Program (BTOP)
  - $154.6M awarded to LA-RICS PSBN
  - Absolute cutoff date of September 30, 2015
- First Responder Network Authority (FirstNet)
  - Independent authority within NTIA
  - Mission to build, deploy, and operate NPSBN

FirstNet™
First Responder Network Authority

- LA-RICS LTE system is part of the National PSBN
  - Managed by the National Telecommunications & Information Administration (NTIA)
    - Executive Branch responsible for telecommunication & policy issues
  - Middle Class Tax Relief and Job Creation Act of 2012
    - Authorization to create the first high-speed nationwide interoperable broadband network dedicated to public safety
  - Technology
    - Long-Term Evolution ("LTE") wireless technology standards and 20MHz in the 700 MHz band

NTIA

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PSBN Sites in LA County

- There are 63 PSBN sites identified for the LA-RICS LTE network in all of LA County
  - 48 fixed location (static) sites
  - 15 portable sites
    - Cell on Wheels (COW)
- All static sites are CEQA exempt qualified sites
  - NEPA clearance required for all sites
  - Heights from 28’ – 70’
  - Stealth and standard monopoles will be deployed
  - ~7 sites will have both LMR and LTE equipment on monopoles

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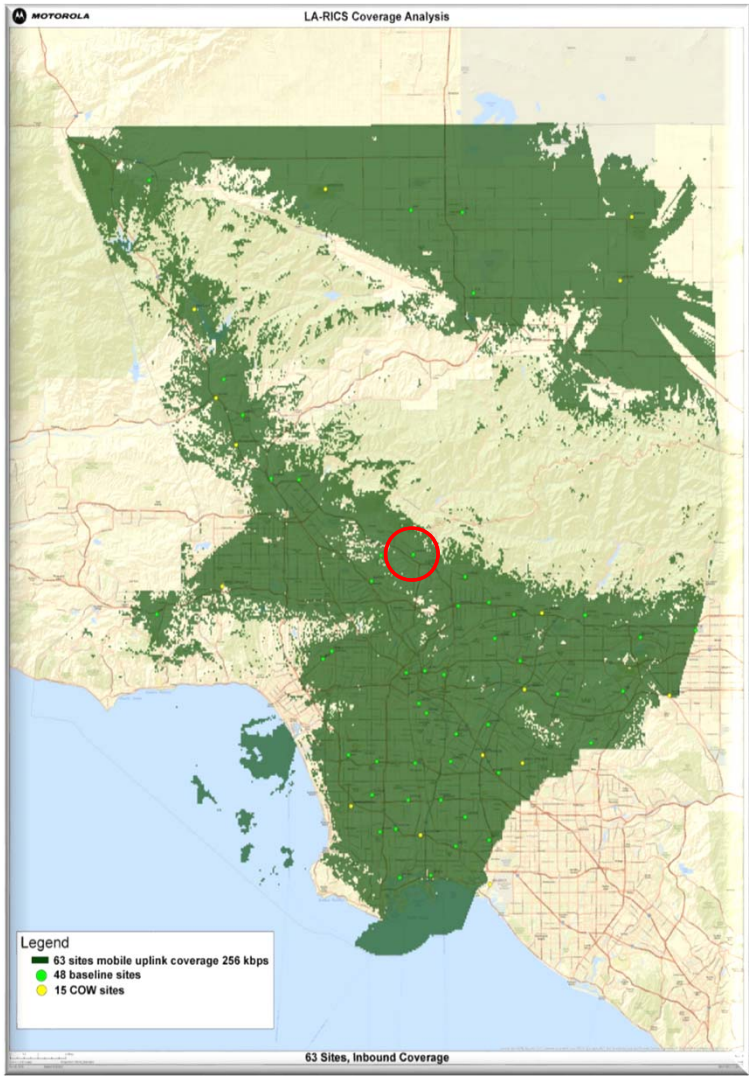
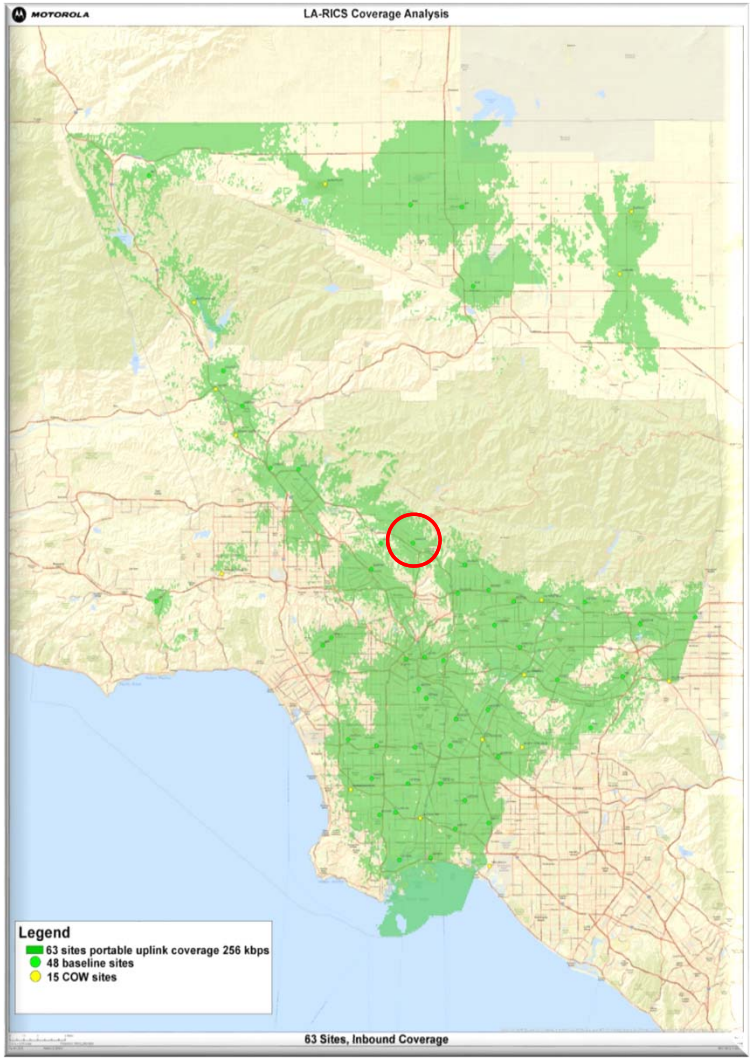
LTE Sites in LA County





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Why Not Commercial Cellular?

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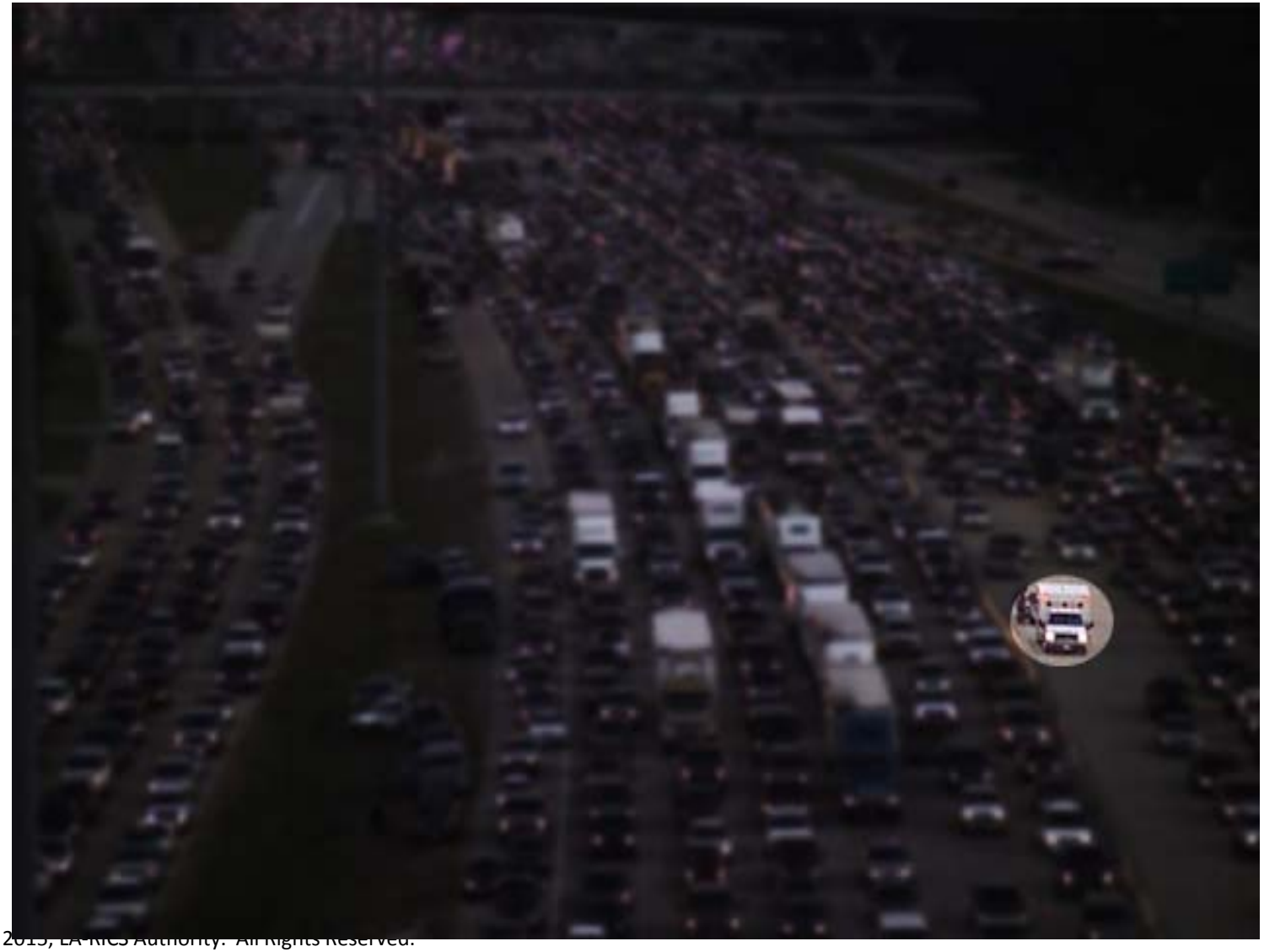

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Why This Site?

- Coverage and Capacity
  - Provide optimal coverage to benefit public safety operations
    - Exclusion of sites would result in coverage and capacity loss
    - Sites outside the area will not provide sufficient coverage
  - The backhaul network will provide high capacity broadband connectivity without reliance on commercial provider
    - Essential in public safety emergencies
- A Sheriff Station provides enhanced security at the site
- BTOP Grant Requirements
  - Broadband service to Community Anchor Institutions (CAI)
    - Law enforcement, fire stations, hospitals, court buildings
    - Support of the National Broadband Initiative
- Meets all CEQA Exemption Criteria

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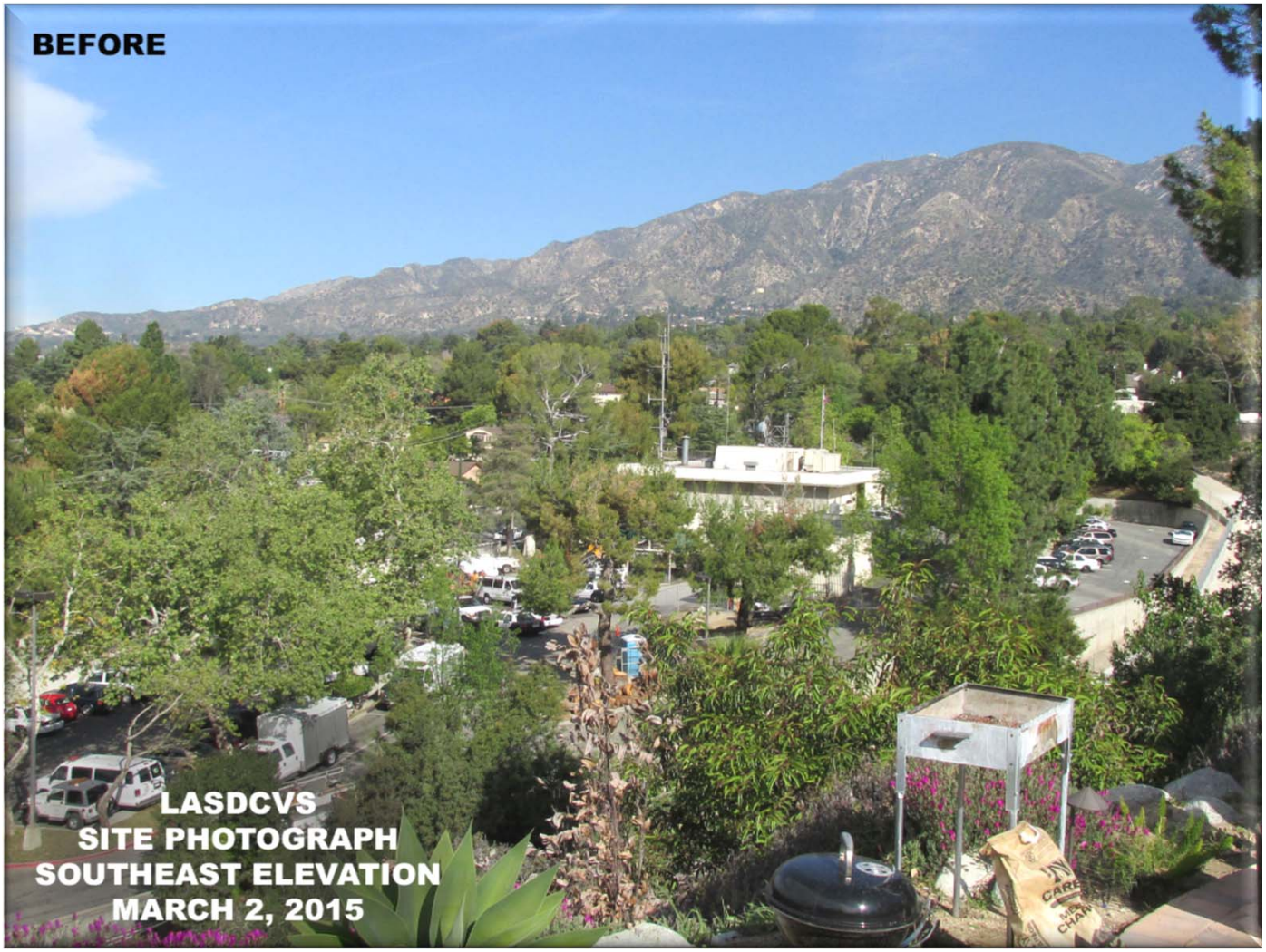
LA Crescenta Sheriff's Station



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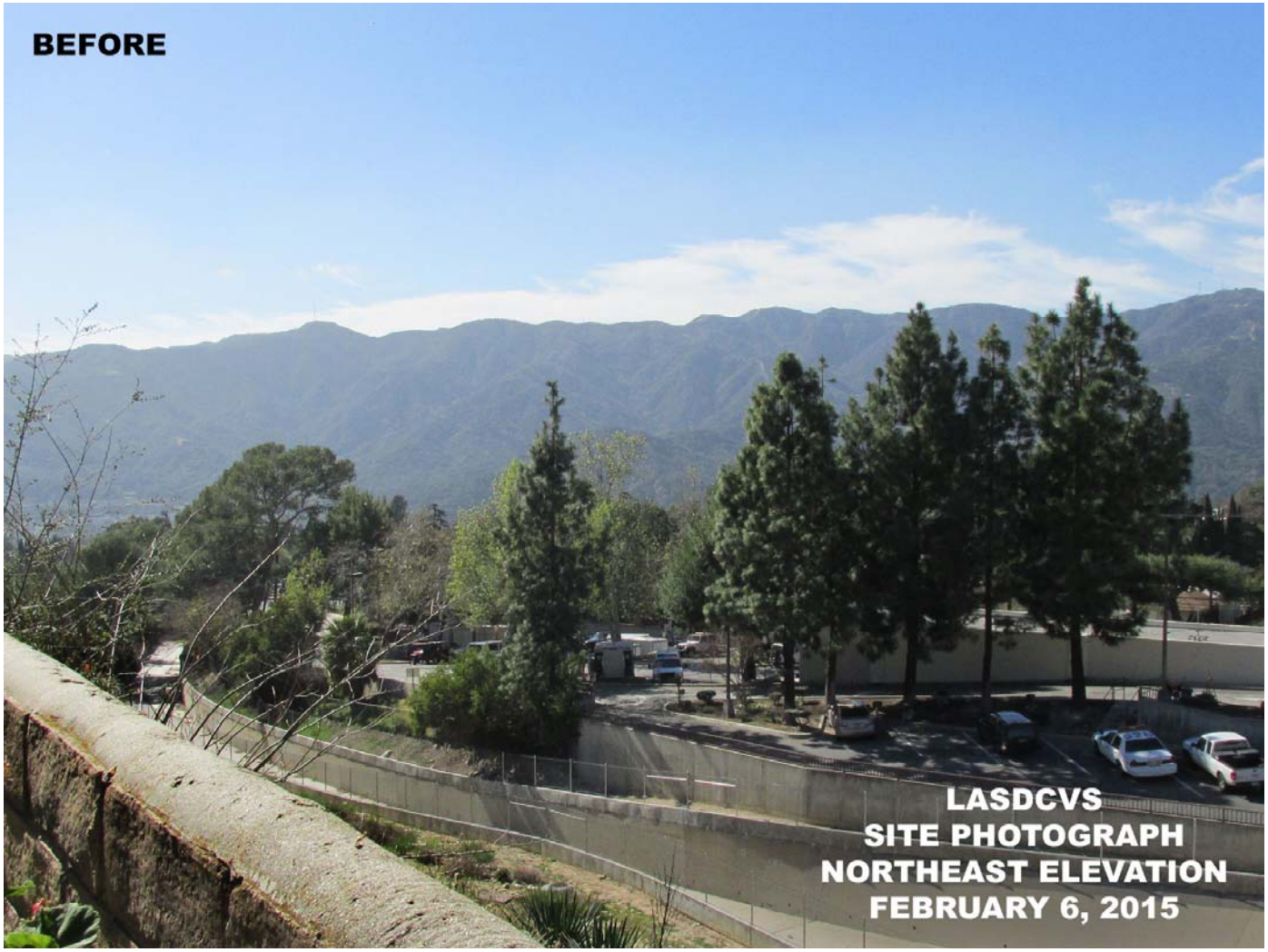

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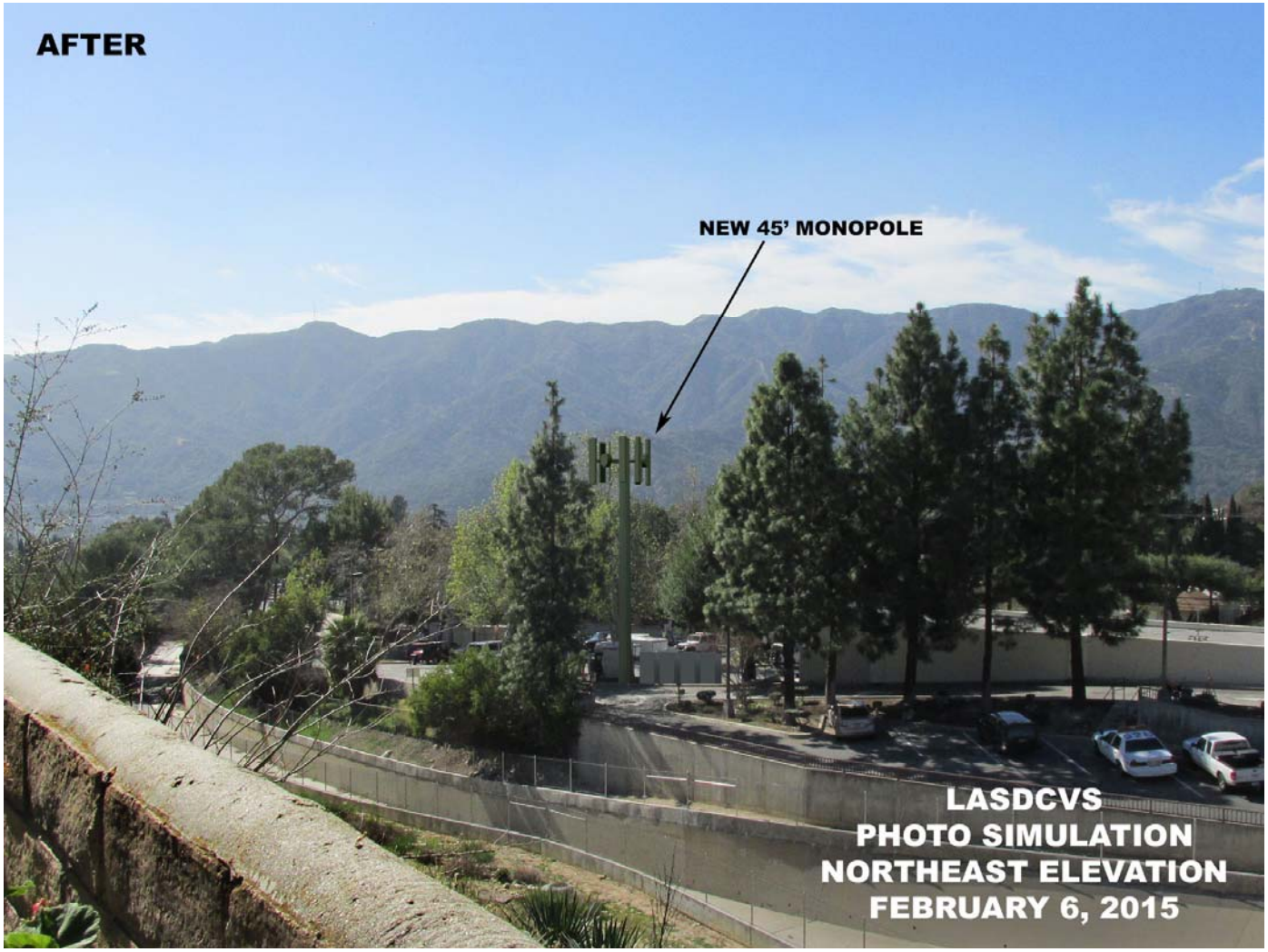

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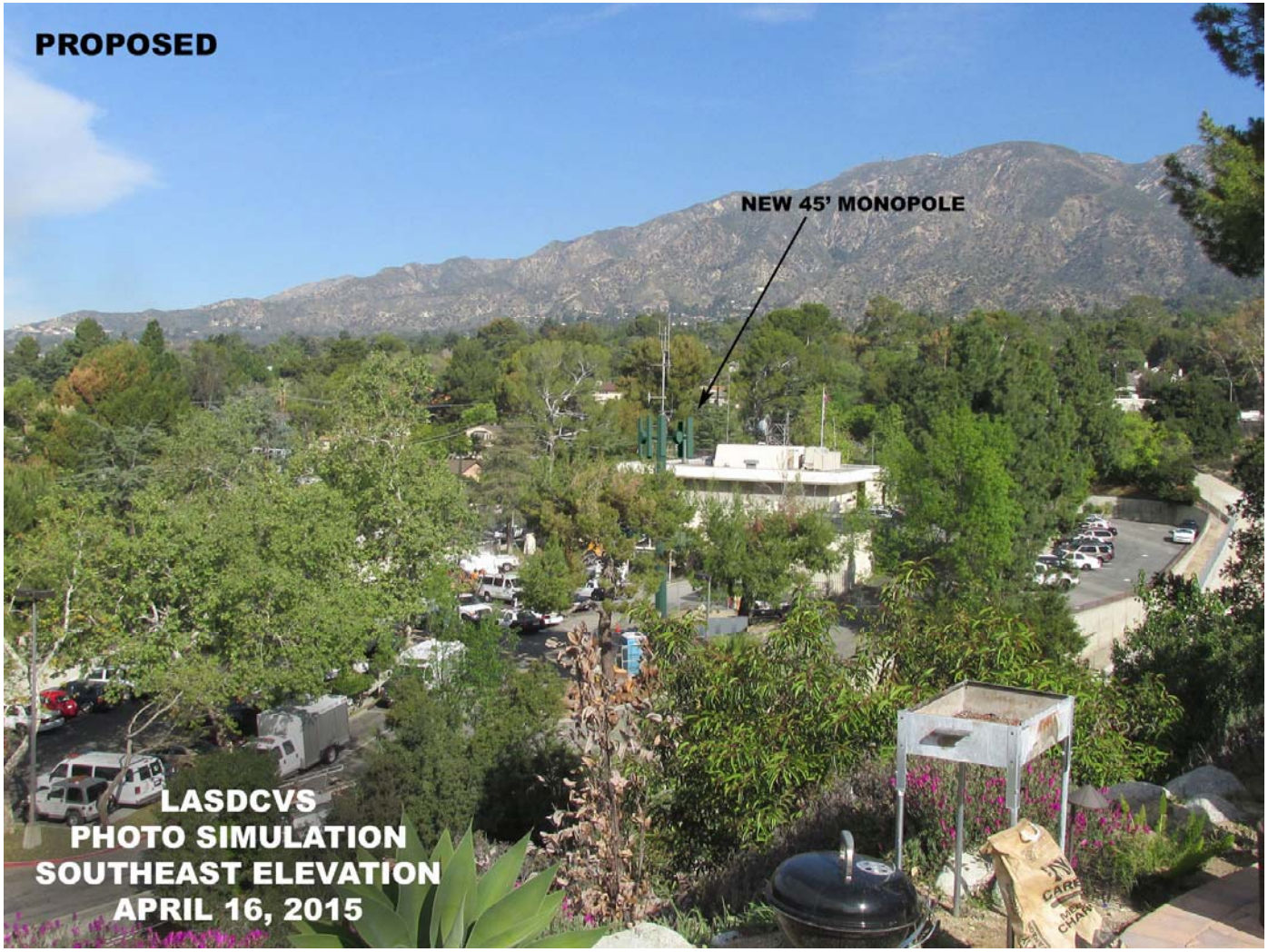

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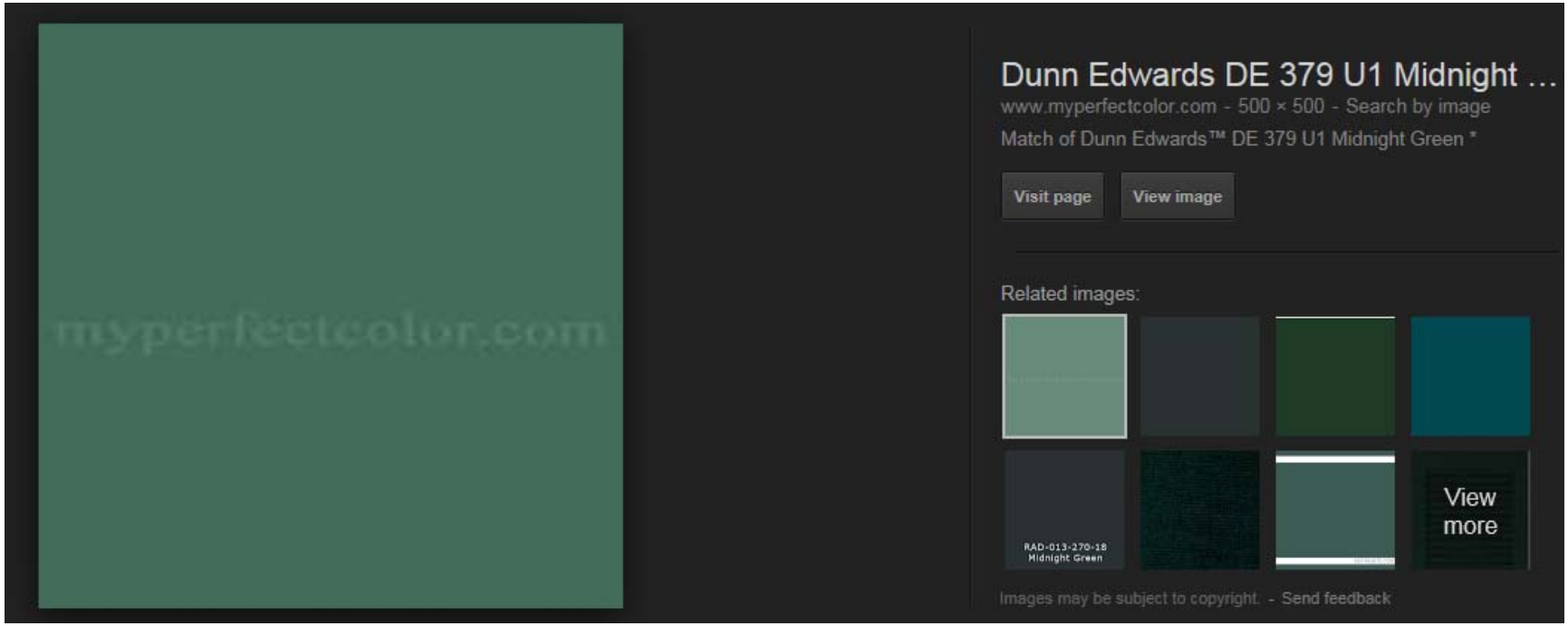

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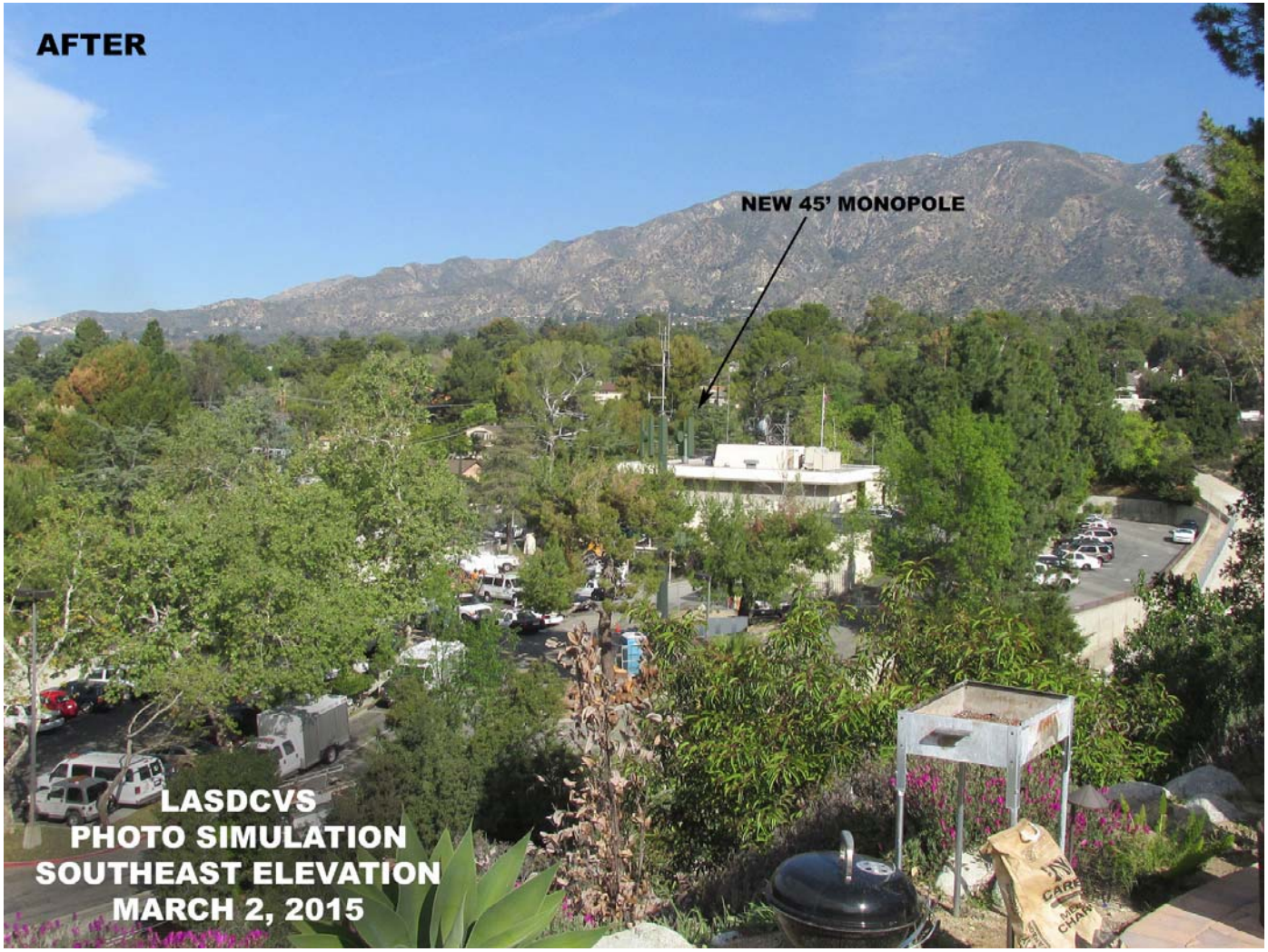

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Radio Frequency Emissions Safety

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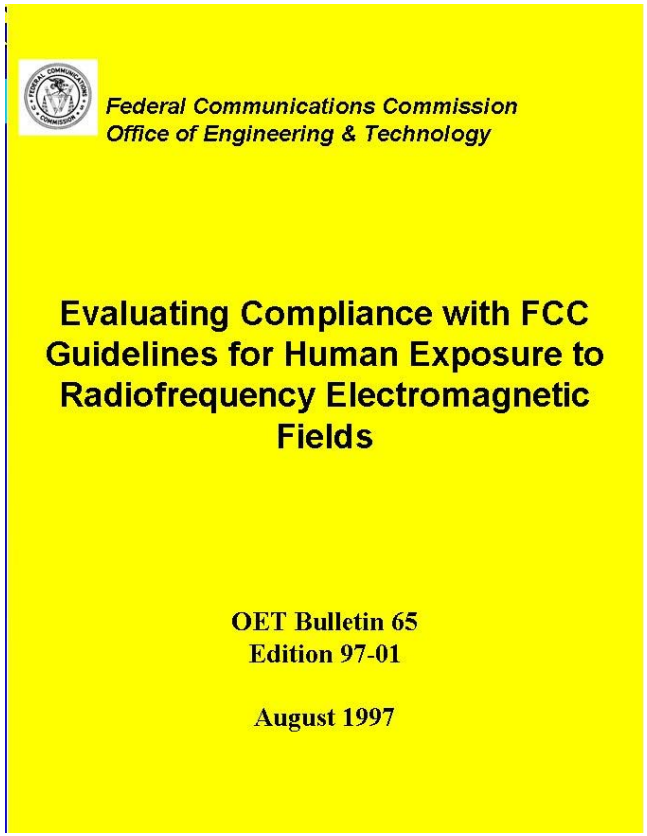
How FCC Limits Were Determined

- Current FCC standards were the result of ~ 18 month review and public comment period
- Thousands of pages of comments from all sectors: (Public, Gov't, Academia, US Standard Setting Organizations, Industry)
- FCC relies on guidance from federal health/safety agencies: FDA, EPA, NIOSH, OSHA to recommend which existing standards to use or modify



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FCC Radio Frequency (RF) Public Exposure Limit

- Current RF maximum permissible exposure (MPE) limit is set at 505 $\mu W/cm^2$
- MPE limit assumes continuous exposure 24/7/365
- Established to be protective of the general population including children and infirmed
- Exposure limit incorporates a safety factor 50 times (50x's) below the RF exposure level that is believed to be potentially hazardous

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Why Have U.S. Standards Stayed the Same Since 1997?

- The vast majority of updated standards in other countries as well as national reviews of the science supporting current standards have recommended maximum public exposure levels that are still very similar to current U.S. safety standards
  - International Commission on Non-Ionizing Radiation Protection (ICNIRP) 2011
  - Health Canada 2012
  - U.K. National Radiological Protection Board: Advisory Group on Non-Ionizing Radiation (2014)
  - Health Council of the Netherlands (2013)
  - International Committee on Electromagnetic Safety C95.1 (2013)

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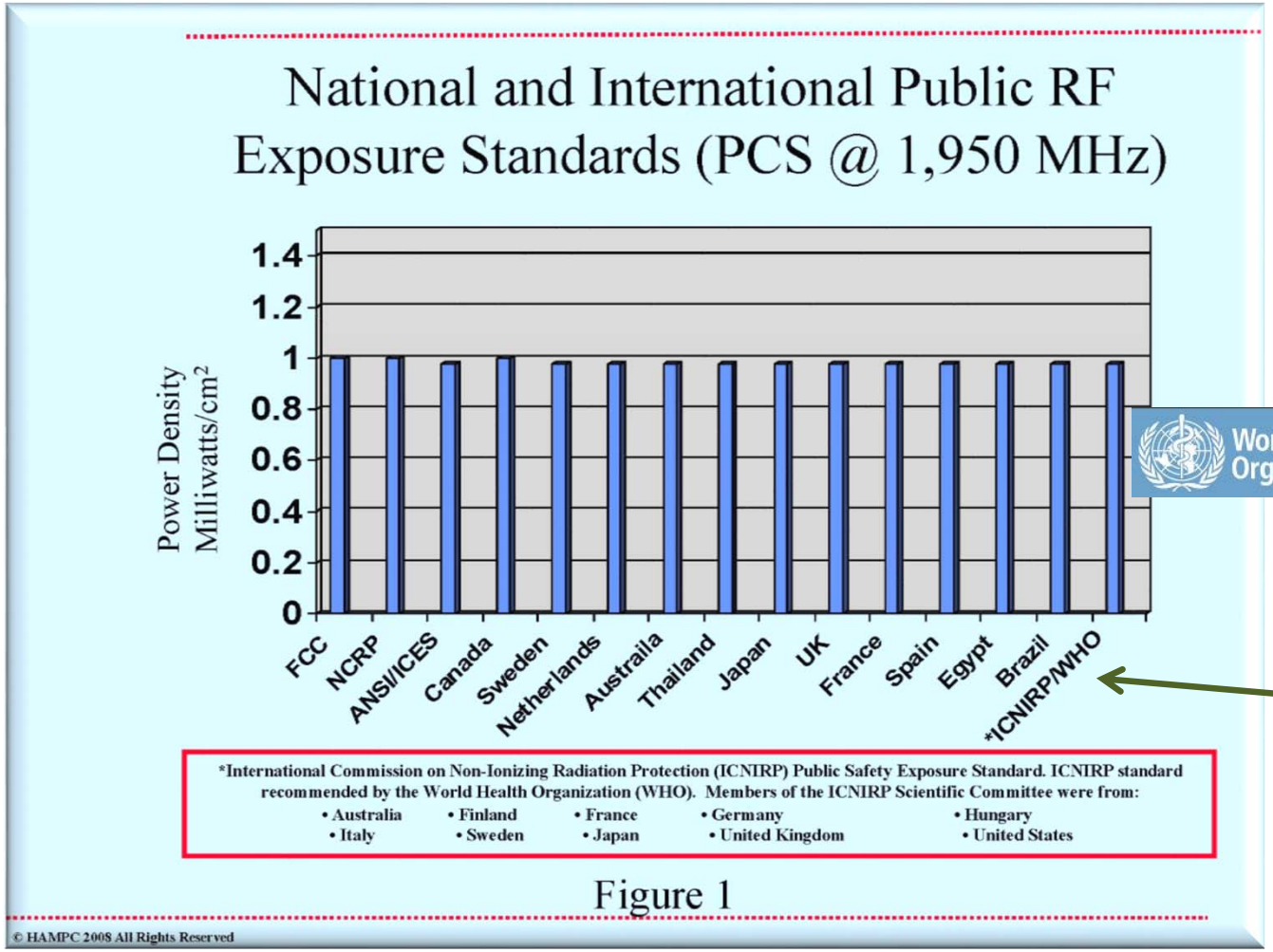
FCC RF Exposure Comparison

Comparison of FCC & LA-RICS RF Exposure to Other RF Safety Standards



World Health Organization

Max Exposure in firehouse (>7,000x's below) Public Exposure Standard

(More than 3 million x's below threshold for potential adverse effects)

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LA-RICS LTE Installations Compare with FCC Limits

- RF emissions from LA-RICS LTE installations are typically only 0.1% to 1.5% of the MPE limit
- In all instances, RF emissions are less than 5% of the MPE
- Inside buildings, these RF emissions levels are further reduced a minimum of 6 to 30 times

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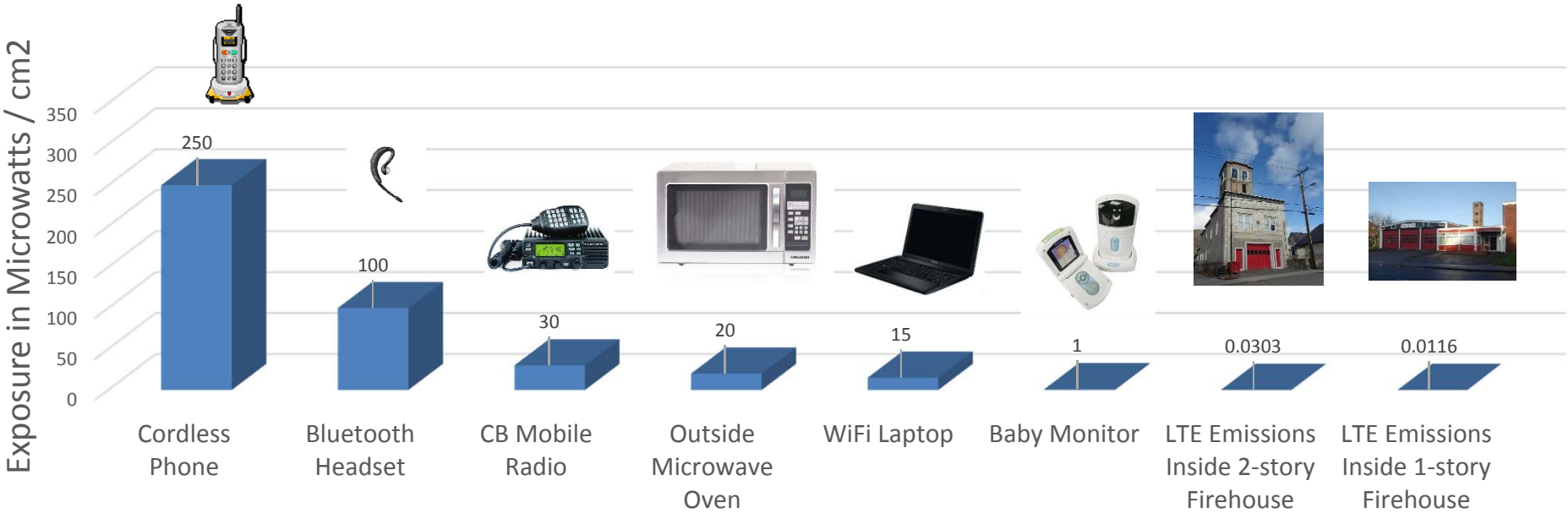
RF Emission Comparisons

LA-RICS LTE Installations Emit Less RF than all the devices below



Specific Absorption Rate (SAR): a measure of the rate at which **energy is absorbed by the human body when exposed to a radio frequency electromagnetic** field.

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Adopting less than 0.001 µW /cm^2 Exposure Limit

- Use of RF and Wireless would either end or be dramatically reduced:
  - Stop all AM/FM Radio & Local Digital TV
  - Remove all Smart Electrical Water & Electrical Meters
  - Remove Microwave Ovens from homes and public locations
  - Remove capability of Fire/Police/& Paramedics to communicate with each other and with the hospital
  - Discontinue air travel (could not use traffic control radar or communicate with planes)
  - Remove WiFi from all public locations
  - No cell phones






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Commitment to Public Safety

"WE'VE NEVER BEEN CLOSER TO REALIZING OUR GOAL OF ENABLING PUBLIC SAFETY OFFICERS TO TAKE FULL ADVANTAGE OF THE BENEFITS OF BROADBAND TECHNOLOGY."

ATTORNEY GENERAL ERIC HOLDER

FIRSTNET WILL "FULFILL A PROMISE MADE TO FIRST RESPONDERS AFTER 9/11 THAT THEY WOULD HAVE THE TECHNOLOGY THEY NEED TO STAY SAFE AND DO THEIR JOBS."

VICE-PRESIDENT JOE BIDEN

FBRUARY 21, 2012

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Commitment to the Community

"Approve the LA-RICS Authority's Corrective Action Plan (CAP) permitting construction of Long Term Evolution (LTE) infrastructure at a smaller number of County owned, operated or controlled sites, as identified in the LA-RICS Authority's CAP; and authorize construction to begin or continue at those County owned, operated or controlled sites, as set forth in the LA-RICS Authority's CAP. However, with respect to the sites located at the (1) Sherriff's Station in Santa Clarita, (2) Sheriff's Station in Crescenta Valley, (3) Bell Gardens Police Department, (4) El Monte Police Department, (5) Sheriff's Station in Industry and (6) Sheriff's Station in Pico Rivera, construction cannot begin at these sites until public outreach has been completed and CEO and LA-RICS staff have reported back and consulted with the respective Supervisorial Districts that these sites are located in, on the outcome of such public outreach efforts and whether construction can now proceed."

Supervisor Michael Antonovich
Los Angeles County Board of Supervisors
April 14, 2015

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Thank You