

# Civil Air Patrol



## Communications Recruiting and Retention

Michele Bremer

8 August 2019

ONE CIVIL AIR PATROL, EXCELLING IN SERVICE TO OUR NATION AND OUR MEMBERS!



# Communications Recruiting and Retention



## **Spoiler Alert:**

**Since the most effective, least costly means of recruiting is retention of people we already have, retention will be heavily emphasized.**



# Communications Recruiting and Retention



## Two Goals for today:

1. I want to give you something of value that you can take home and use for comms recruiting and retention
2. I want you to give me something of value that I can take home and use for comms recruiting and retention.



# Communications Recruiting and Retention



## Question 1

**Why did you join CAP and become involved with communications?**



# Communications Recruiting and Retention



## Question 2

**What makes you stay in CAP communications?**



# Communications Recruiting and Retention



## Question 3

**What makes you sometimes wonder if you want to stay in CAP communications?**



# Communications Recruiting and Retention



**I would like to give you a tool  
that you can take home  
and use for comms recruiting and retention.**

# Civil Air Patrol



## HF Radio:

## WHY?

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8 August 2019

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# The New Mission



**CAP has been tasked by DoD  
with a post-attack flying  
mission.**

CJCS OPORD2, 27 July 2018



# Executive Order, March 26, 2019



## Executive Order on Coordinating National Resilience to Electromagnetic Pulses

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1. Purpose. An electromagnetic pulse (EMP) has the potential to disrupt, degrade, and damage technology and critical infrastructure systems. **Human-made or naturally occurring EMPs can affect large geographic areas, disrupting elements critical to the Nation's security and economic prosperity, and could adversely affect global commerce and stability. The Federal Government must foster sustainable, efficient, and cost-effective approaches to improving the Nation's resilience to the effects of EMPs.**

DONALD J. TRUMP  
THE WHITE HOUSE,  
March 26, 2019.



# FEMA Briefing, December 2017



**Today's power grid and information networks are much more vulnerable to EMP than those of a few decades ago.**

- **We take seriously the U.S. EMP Commission's recommendation that DHS "play a leading role in spreading knowledge of the nature of prudent mitigation preparations for EMP attack to mitigate its consequences". (Ref: 2008 EMP Commission Report, page 181)**



# Post Attack Scenario



**The US is now facing threats from multiple sources.**

- **An attack from man or nature could destroy or disable communications infrastructure that we take for granted, and other infrastructure, too.**
- **The effects of removing communications would be devastating.**



# Cyber Attacks - FEMA 2018



## 2018 FEMA National Preparedness Report: In-depth analysis of 5 Core Capabilities including

- **Cybersecurity:** Protect (and if needed, restore) electronic **communications** systems, information, and services from damage, unauthorized use, and exploitation.



# Cyber Attacks –Critical Infrastructure



**Distributed Control Systems (DCS) and/or Supervisory Control and Data Acquisition Systems (SCADA) control all large energy production and transmission facilities.**

- Dell saw worldwide SCADA attacks increase from 91,676 in January 2012 up to 675,186 in January 2014.**



# Post Attack Scenario



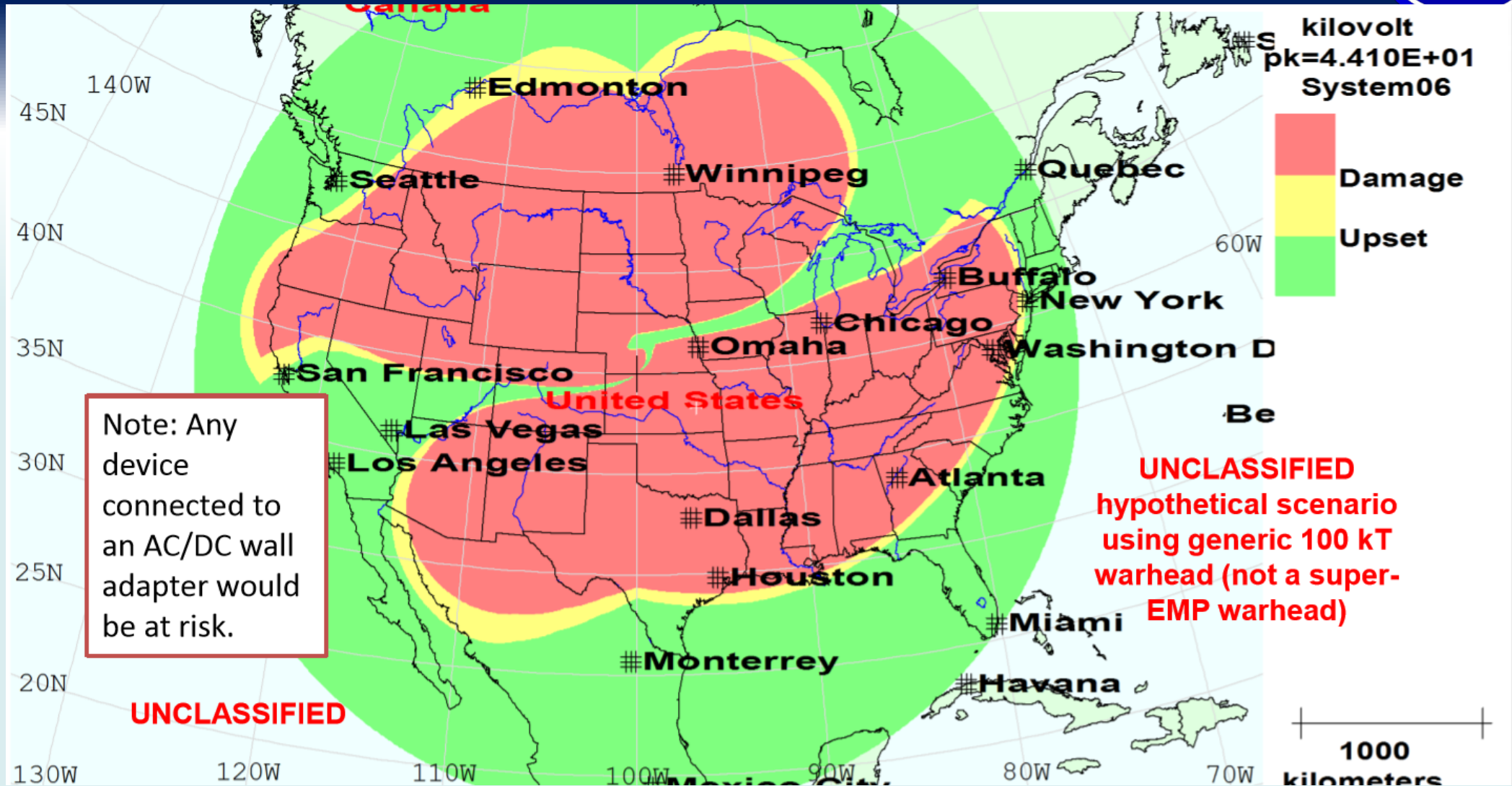
**Imagine that, within the space of a few seconds, we lost the ability to**

- **Text or call anyone, including 911**
- **Use a credit/debit card**
- **Operate a fuel pump**
- **Use a computer/smart phone for anything**
- **Use any electrical device except on battery power**





# How Much Is Left?: HEMP impact on cordless phones and similar devices







# Why rely on radio? We have cell phones and computers...



<b>Infrastructure (rating assumes not EMP protected)</b>	<b>Days ↔ Months</b>
<b>Undersea Cable Infrastructure</b> (main risks: E1 + E3)	<b>Upset and damage</b>
<b>Satellite in space</b> (System Generated EMP (SGEMP) + radiation belts)	<b>Upset/degradation</b>
<b>Satellite terminals/support</b> (vulnerable to HEMP E1)	<b>Upset and damage</b>
<b>HF radio equipment</b> (vulnerable to HEMP E1)	<b>Upset and damage</b>
<b>HF sky wave media</b> (heals in hours); HF groundwave not impacted	<b>HF propagation</b>
<b>Computers and Ethernet Interfaces</b> (vulnerable to HEMP E1)	<b>Upset and damage</b>
<b>Desk phones</b> (vulnerable to E1 EMP conducted on power/data cords)	<b>Upset and damage</b>
<b>Cell phones</b> (risk to towers/backhaul from E1; handsets generally OK)	<b>Upset and damage</b>
<b>Routers and phone switches</b> (vulnerable to HEMP E1)	<b>Upset and damage</b>
<b>Radio and TV stations</b> (likely to go off-air immediately due to E1)	<b>Upset and damage</b>
<b>Portable battery operated radios</b> (eventual power problem)	<b>Battery dependent</b>
<b>Land mobile radios</b> (OK if not trunked; eventual power problem)	<b>Power dependent</b>



# Post Attack Scenario, cont.



- **How will military commanders get information about usable airport runways, railroads, and interstate highways, in order to move assets to where they are needed?**
- **How will state and local police and other civic authorities get information they need to maintain order?**



# America's Best Kept Secret



## YOU are how.

- Civil Air Patrol will be tasked with damage assessment flights, and with passing information back to the DoD planners.
- This will require air crews, Incident Command staff, and communicators working together.



# ....Back to the DOD Operations Order



**As usual, CAP must**

- **Perform aerial monitoring, damage assessment and light transport of personnel and equipment.**

**In addition, we must now**

- **Develop a nationwide HF traffic capability which is compatible with DoD and capable of delivering encrypted formal record traffic anywhere in the country.**



# ....Back again to the Operations Order



**“The main changes with the new mission are:**

- This is an operations mission, not a communications mission**
- It requires communications people to provide mission critical support to ops under very bad conditions”.**

**Malcolm Kyser**

**Senior National Program Manager,  
Command and Control Communications**



# Can we really do this?



Recently natural disasters in several states and Puerto Rico have involved doing a similar job.

The biggest difference between the natural disasters and a post attack scenario is how much we have left to work with.







# How did we do it?



Air crews did what they were trained to do.

Incident Command staff did what they were trained to do.

Communicators did what they were trained to do.

Using both HF and VHF radios, CAP helped coordinate critical assistance.





# Going Forward



## Squadrons:

- **Develop plans and protocols so that members know what to do, depending on the circumstances.**

## Members:

- **Get trained as an MRO and practice using radios, both VHF and HF.**
- **Develop plans and partnerships with nearby neighbors or squadrons with radios.**
- **Implement the plans during exercises, and practice with partners.**





# HF? VHF??



## HF (High Frequency) Radios

- Cover longer distances (150+ miles).
- “Infrastructure” is widely distributed as individual radios.

## VHF (Very High Frequency) Radios

- Cover shorter distances (line of sight).
- To extend line of sight, repeaters are used (require line power and/or batteries, and internet access for ReadyOp).



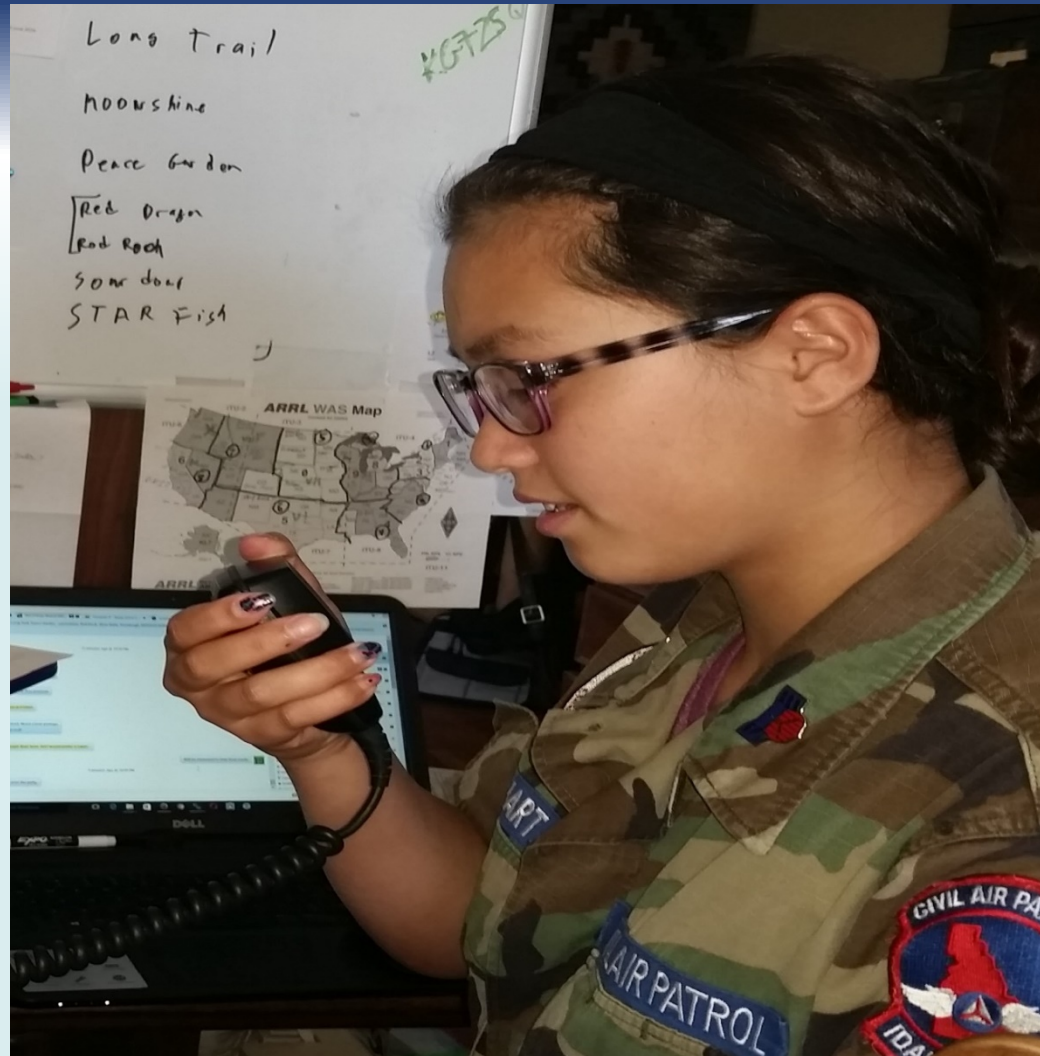
# What about cadets?



- In missions, in exercises, and in emergencies, cadets participate in comms as equals with participating senior members.
- Cadets are often more tech savvy than senior members.
- Cadets have a greater chance of experiencing a national disaster at some point in their lives than senior members.



# Cadets: A Valuable Resource



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# Communications In A Grid Down Scenario



Via Big Bend 5

CAP RADIO MESSAGE FORM				* Page	of	Pages
PRECEDENCE:		VMSG NUMBERS:	INCOMING:	OUTGOING		
DTG:	Z					
FROM:	STORM CLOUD 87					
TO:						
* INFO:						
* SUBJ:						
GROUP COUNT:						
BREAK						
TOTAL COMMERCIAL INFRASTRUCTURE FAILURE. NO CELL PHONE COMMUNICATIONS. ONLY LANDLINE IS WORKING. NO CONTACT WITH WING COMMANDER. HAVE CONTACT WITH ICP. 45 MINUTES AFTER THE HOUR ON SEH.						
BREAK						
MESSAGE RECEIVED FROM BIG BEND 5				* Operator Notes:		
STATION:	TRIBLAD 19			271500 SEP 17 KED		
MESSAGE SENT TO						
STATION:						
STATION:						
STATION:						

CAP FORM 105, 8 APR 2018 PREVIOUS EDITIONS MAY NOT BE USED \* indicates optional field

Scanned by CamScanner



# Basic Advice:



**“When the ground stops shaking, make sure you’re okay. Then make sure your family is okay. Then make sure your neighbors are okay. After that, get on your radio and see who you can hear, and pass a SITREP.”**

**-LtCol. Mike Sinclair, Washington Wing DC**



# CAP Communications



- In a natural disaster, it is important to be able to get information to the state. CAP can help.
- In a man-caused disaster, information flows to the DoD and the armed forces. CAP is uniquely positioned to facilitate that.

**Radio operation, on air procedures, and message traffic are critically important skills. They are also perishable. Regular practice is needed to maintain competence.**



# CAP Communications



- In CAP, Communications supports Operations. That is the top priority.
- Other communications services have different priorities.

**Recognize your potential strategic importance!**





# A Way Forward For Communicators



- **Work with Operations at every opportunity (Exercises AND missions!)**
- **Practice radio operations and procedures as if your life depended on it.**

**Someday, it may.**





# Communications Recruiting and Retention



Please let me know if I can assist you in

- Analyzing recruiting goals for your wing or region
- Identifying key people as retention targets
- Developing a recruiting plan
- Developing appropriate recruiting tools
- Executing our plan

Contact me: [Mbremer@CAP.gov](mailto:Mbremer@CAP.gov) or 719-661-7181



# Communications Recruiting and Retention



CAP HF Operator Recruiting						
Alaska Wing						
Audience	How to identify audience	Best way to reach	PPT to use - Focus	Campaign Leader	Start/End Dates	Delivery Method
Squadron Commanders	DC AKWG	Direct email contact to set up group call(s)	Cadet and General	Wing DC,	Summer 2019	Email ppt, group call
CAP Cadets	squadron commanders	through squadron commanders	Alaska Cadet - combining cadet and Alaska General. Focus on parity with Sr. Members, opportunity for active involvement	Squadron commanders	Summer, 2019	In-person PPT in small groups
Ex military CAP members	by squadron commanders	through squadron commanders	Leverage familiarity with defense issues to continue to serve on your terms.	Wing commander, PAO	Summer, 2019	Virtual such as GoToMeeting with PPT one-on-one
Other members	Local amateur radio club members	Local amateur radio clubs, press releases, social media postings	Patriotic contribution	Wing or squadron commanders, PAO	Summer, 2019	In-person PPT in small groups
Patriotic General Public	social media - common interest groups	Press releases, social media postings	CAP Alaska Recruitment -- Focus on opportunity to serve your country from the privacy and seclusion of home. Education provided.	PAO	Summer, 2019	In-person PPT in large groups
Potential Cadets	from cadets	social media postings, referrals from cadets, high school activity fairs	Focus on AF Auxillary status. Opportunity to "fly" radio daily	Squadron or cadet commanders	Summer, 2019	In-person PPT individually



# Questions?

