

# **ARES**

***A Vital Resource for Emergency Management***



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# **ARES:** **A Vital Resource for Emergency Management**

*About the presenter*

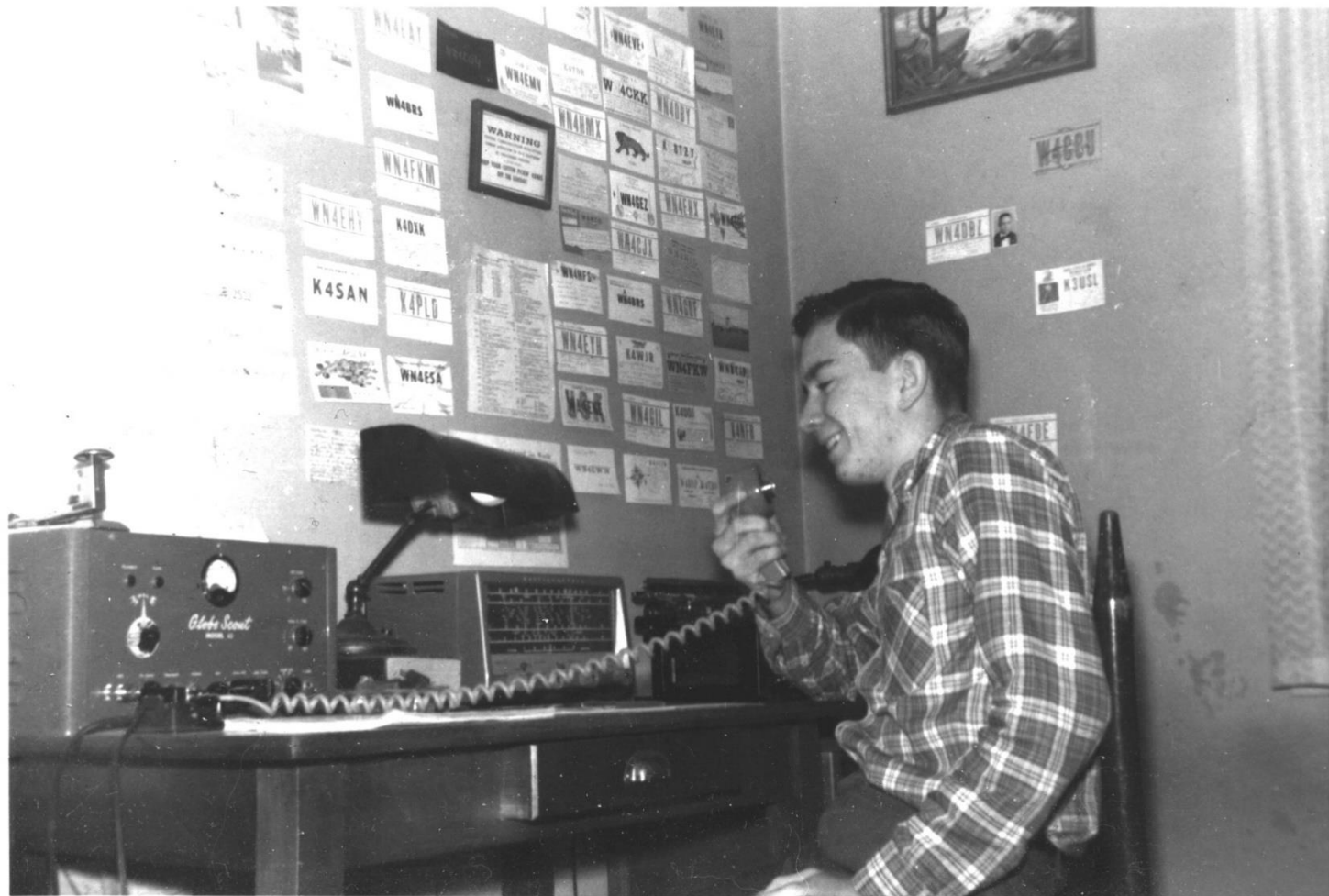


**B.J. Wilson, CEM®**

**WØAIR**

*Emergency Communications Program Director, DERA*

(Or for me, how it all began)  
**WN4EYA then WA4EYA in 1962**



OCT 1962

# About ARES

## *Amateur Radio Emergency Service*

**ARRL provides overall structure, materials and guidance to ARES through HQ staff support and coordinators at the Division, Section and Local levels.**

**In Canada, the *RAC Auxiliary Communications Service* is managed in a similar way by Radio Amateurs of Canada (RAC), and there is continuing need for cross-border mutual support.**

*Every licensed amateur in the U.S., regardless of membership in ARRL or any other local or national organization, is eligible to apply for membership in ARES. Specific training may be required locally.*

*Only licensed radio amateurs are eligible for ARES membership.*

# **About ARES**

## ***Most Likely Agencies to Call on ARES***

**State and Local Offices of Emergency Management**

**Volunteer Fire Departments**

**School Districts**

**Disaster service organizations such as the American Red Cross, Salvation Army, other church and humanitarian organizations**

**Scouts, local unaffiliated groups, special event organizers**

**Organizations you educate about ARES**

# **Emergency Manager's Perspective**

## ***Advantages of ARES***

**Lots of free labor, equipment and materials**

**Flexible capability, even Create-it-as-You-Go innovation**

**Long history of reliable service**

## ***Disadvantages of ARES***

***Volunteers may not be available when needed***

***Lack of security / CBI clearance of all volunteers***

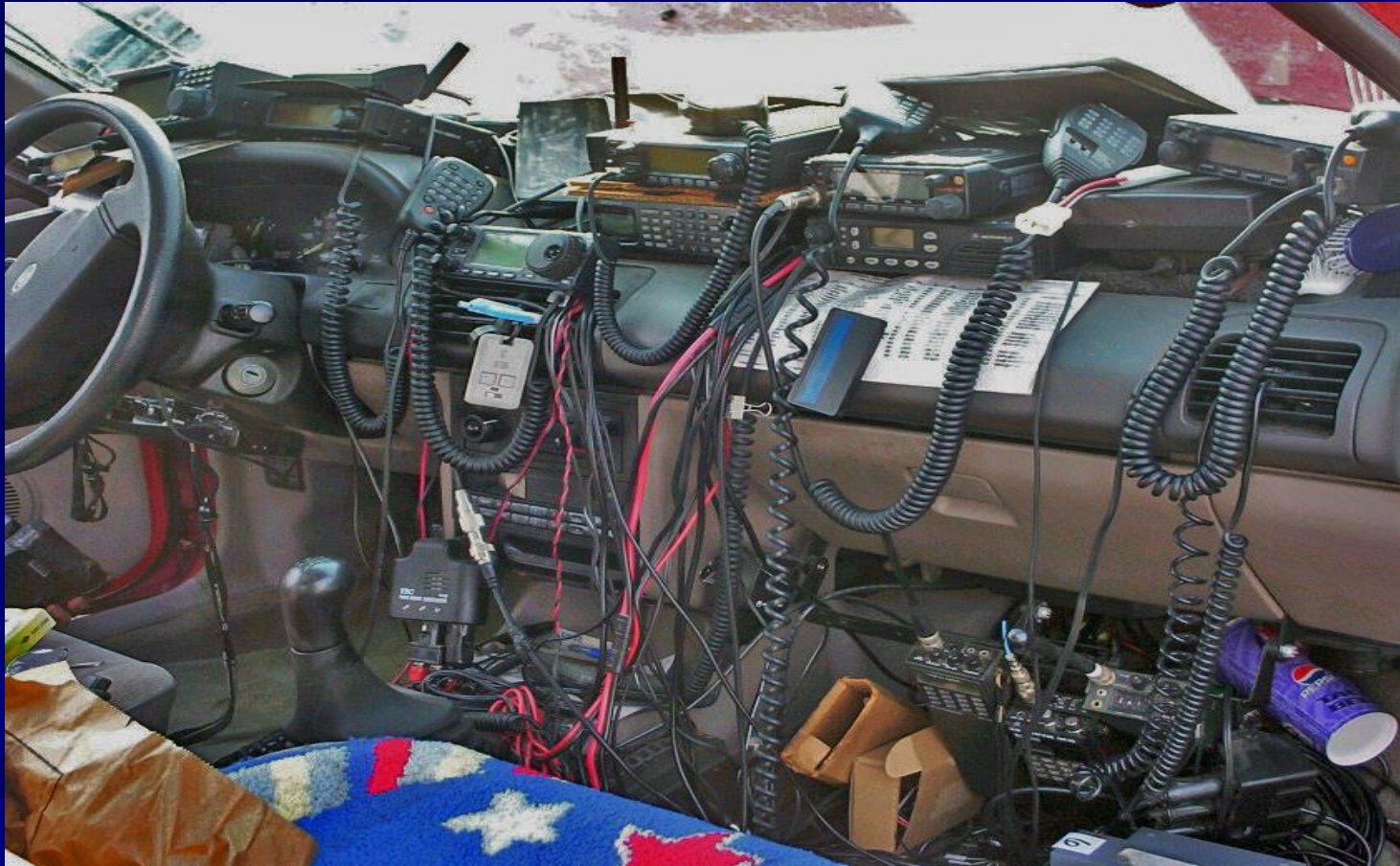
***Questions of competency and ICS Task Qualification***

***ARES cannot provide secure (encrypted) communications***



# Emergency Manager's Perspective

*(Why we sometimes scare Emergency Managers)*





# Emergency Manager's Perspective

*(Why we sometimes scare Emergency Managers even more)*





# Emergency Manager's Perspective

*(They saw this once. They remember.)*



# Emergency Manager's Perspective

*(And then imagine this)*



# Emergency Manager's Perspective

*(They believe someone promised them this)*





# Emergency Manager's Perspective

*(But they fear getting this)*



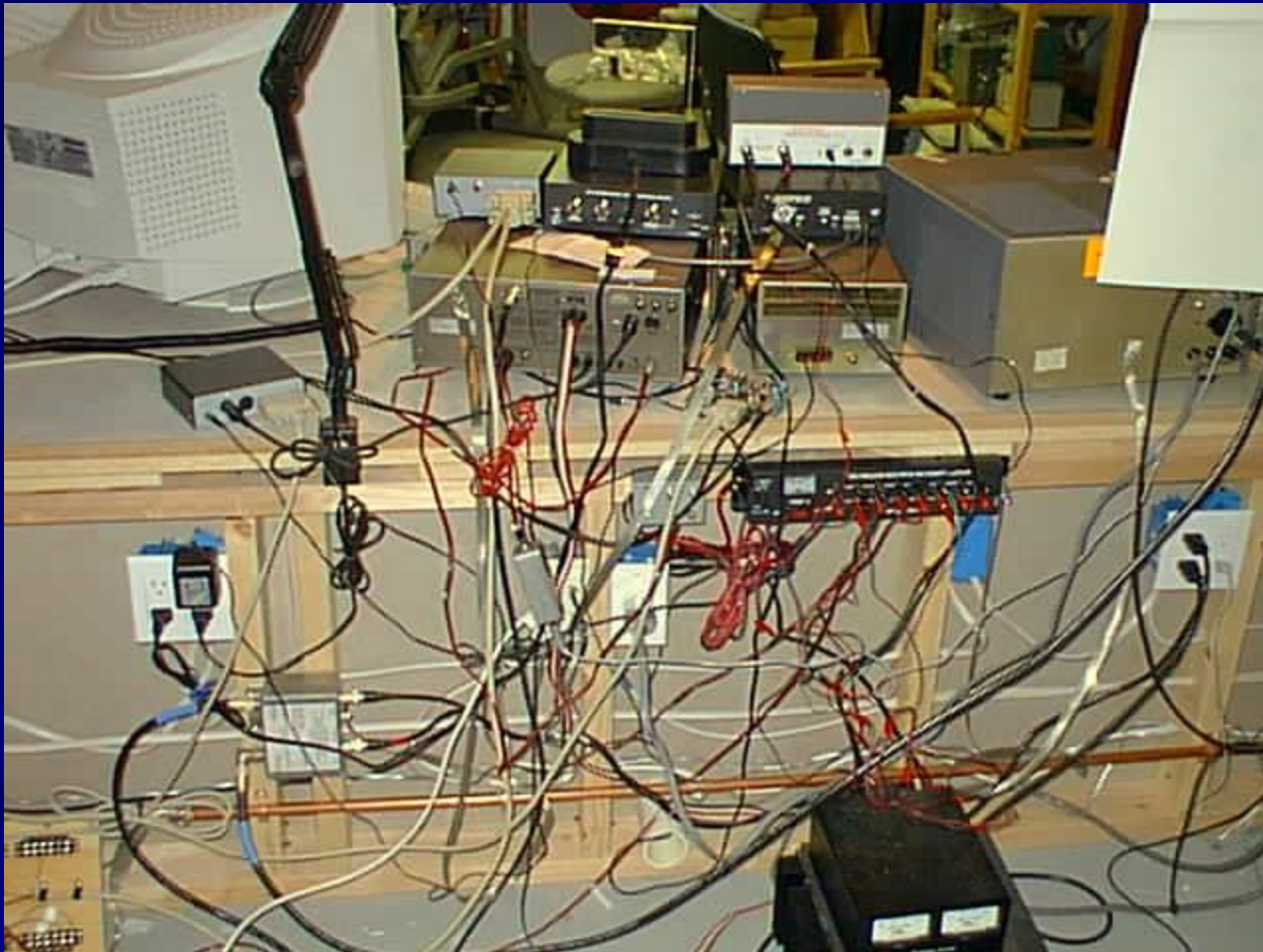
# Emergency Manager's Perspective

*(Or maybe this)*



# Emergency Manager's Perspective

*(In reality, they might get this. But it will work !)*





# Emergency Manager's Perspective

*(Headlines Influence Perception)*

Erie amateur radio operator faces more charges of airing bomb, other threats

Ham Talks Himself Into Jail-- for a Second Time

Ham Radio Operator arrested, Fined \$24,000 for malicious interference.

Harbor City electronics engineer and ham operator, was sentenced to federal prison

Robert Hansen, Ham Operator, Russian Spy

An amateur radio operator has been arrested as she made her last in a series of broadcasts threatening the lives of local police officers and fire department personnel.

# Challenges for ARES

*The Planning Challenge: What should we expect?*

**The future is unlike anything we've experienced in the past.**

**History simply repeats itself.**

**If you aren't moving with the flow, you're falling behind.**

**Stick with the "tried and true" and you'll never go wrong.**

**Don't worry...science and technology will save us!**

**All is lost...science and technology will destroy us!**

# Challenges for ARES

- # 1 Perception that ARES is outdated, not needed  
*(FirstNet®, Trunked Systems, Encrypted Radio, SATCOM)*
- # 2 Apathy because day-to-day systems work very well
- # 3 Aging volunteers and global “Bowling Alone” epidemic
- # 4 Overly optimistic community risk assessments
- # 5 Overworked team leaders may get burned out
- # 6 Big job to recruit, train, retain reliable members



# **Challenges for ARES**

## ***Planning & Organization Issues***

***What agencies can ARES serve and what's their need?***

***What are we expected to do?***

***How should we do it?***

***Who will be our most reliable volunteers?***

***Who in the community will help us?***

***Who will oppose us?***

***Who will be on our team in years to come?***

***Suggestion: Three Step Planning Approach***

# Meeting the Challenge

## *Step One: Establish Strategic Priorities*

- ***Clarity of mission and role***

- *You can't do everything for everyone, everywhere*
- *What agencies are willing to help you help them?*
- *Written agreements and formal plans*

- ***Develop mission ready resources of the needed type***

- *Reliable, interoperable systems*
- *Qualified, trained, motivated people*
- *Efficient organization*
- *Appropriately tasked and supported*

# **Meeting the Challenge**

## ***Step Two: Establish Trust & Cooperation***

- ***With served agencies***
- ***Within the organization***
- ***Between organizations...even competitors***

***Trust can take years to build. And an instant to destroy.***

***Effective leadership -- Dedicated team members***

***Frequent interaction with served agencies***



# **Meeting the Challenge**

## ***Step Three: Training & Team Activities***

- ***Recruit, train and retain the very best***
- ***Clear expectations for everyone***
- ***Task training, exercises, record keeping***
- ***Opportunities to apply training***
- ***Frequent team activities including fun & family events***
- ***Realistic, candid evaluations***
- ***Culture of continuous improvement: Hotwash & AARs***

***Nurture the next generation***

# **What Served Agencies Want**

*Timely response*

*Dependable, flexible support*

*Drama-free interaction*

*Accountability*

*Absolute integrity*

***What specific support can ARES provide?***

**Only you at the local level know**

# **What Volunteers Want**

***An assignment that truly matters***

***Training for the job***

***Clear guidance and support***

***Respectful supervision***

***Camaraderie***

***Recognition***

# ***ARES Strengths***

***Timely response - Flexible capabilities***

***Solid, proven organization***

***Local, regional, national, global communications***

***Fixed, mobile, portable***

***Infrastructure independent***

***Resilient networks***

***High-tech / Low-tech resource mix***

***(and the price is right)***



# ***ARES Opportunities***

***Backup to Public Safety Communications,  
Logistics, Information Gathering, Public Alert and  
Warning, Community Relations***

***Range of modes and capabilities***

***Winlink   APRS   ATV   Mesh   Voice   Data***

***Fixed   Mobile   Portable   Airborne   Marine***

***We can build what agencies need***

# ***ARES Challenges and Opportunities***

Past Success...No Predictor of the Future



# **Contact**



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# **Backup Slides**





# **Emerging Challenges for ARES**

## ***Interoperability Issues***

***Operating modes***

***Frequencies***

***Protocols – Net procedures***

***Served Agency requirements***

***Training and discipline of the team***

***We often solve one problem by creating many others***

# Emerging Challenges for ARES

## *Reliability*

- *No single point of failure*
- *Redundancy*
- *Resiliency*
- *Robust components*
- *Highly skilled operators and maintainers*
- *System designed with all failure modes in mind*
- *Limitations known and planned for*
- *Tested and trusted*

# **Emerging Challenges for ARES**

## ***Interoperability Issues***

***Operating modes***

***Frequencies***

***Protocols – Net procedures***

***Served Agency requirements***

***Training and discipline of the team***

# *Interoperability Lessons*

***ARES can learn from the mistakes of others!***

- *Experimentation & development are good*
- *Operational standardization is essential*
- *Best system in world is useless if you can't communicate with others*
- *Careful, deliberate planning in everything*
- *Insistence that manufacturers standardize*
- *“Proprietary” is a bad word*



# Disaster challenges

**Uncertain Events**

**Uncertain Needs**

**Uncertain Resources**

**Uncertain Information**

**Unknowns**

Disaster challenges

Uncertain Events

Uncertain Needs

Uncertain Resources

Uncertain Information

Unknowns

# Fog of War



**Dependable and Effective**



**Dependable and Effective**  
***If...***





**Dependable and Effective**  
***If...Well trained, disciplined, managed, supported***

# **Common Elements of Failure**

**Plans**

**Procedures**

**Training, Exercise and Evaluation**

**Logistics / Supplies**

**Equipment**

**Teamwork**

**Supervision**

**Personal Readiness and Commitment**

# **Common Elements of Success**

**Plans**

**Procedures**

**Training, Exercise and Evaluation**

**Logistics / Supplies**

**Equipment**

**Teamwork**

**Supervision**

**Personal Readiness and Commitment**

# **Quick ICS Review**

**Concepts**

**Organization**

**Procedures**

**Your role as a communicator**



# Key ICS Concepts

**Unity of Command**

**Modular Organization**

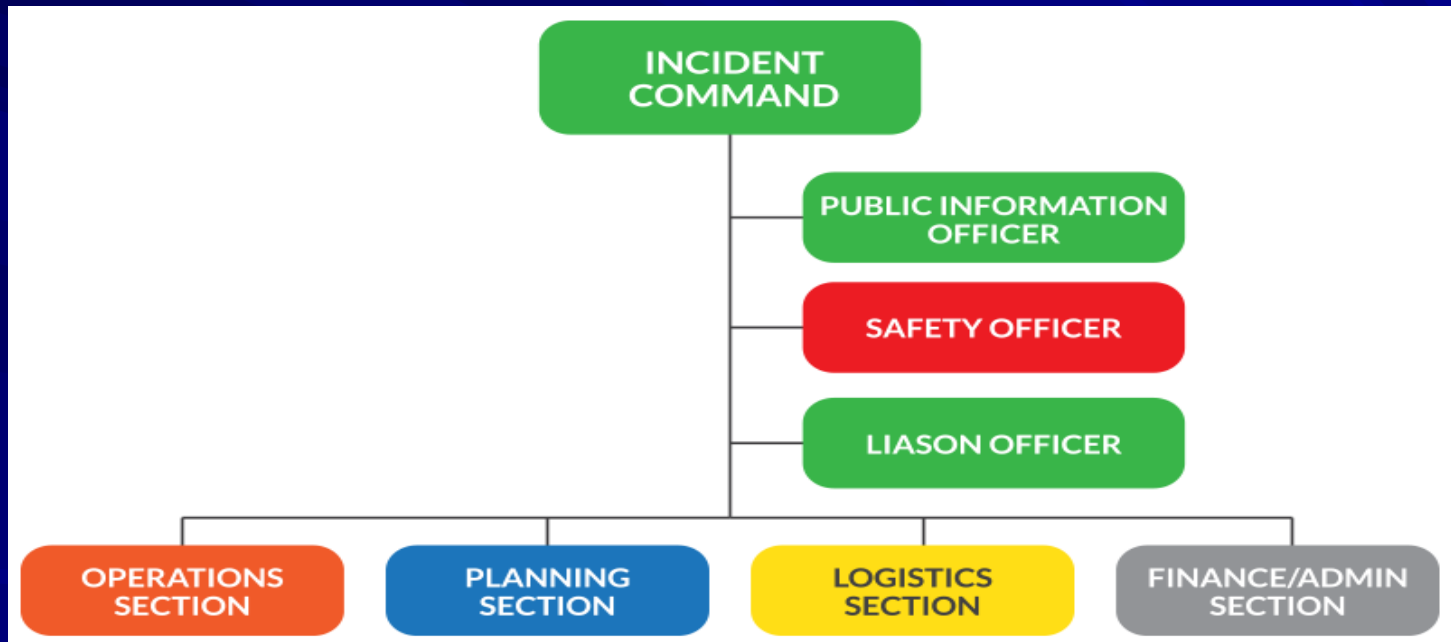
**Standardization...*With Flexibility***

**Span of Control**

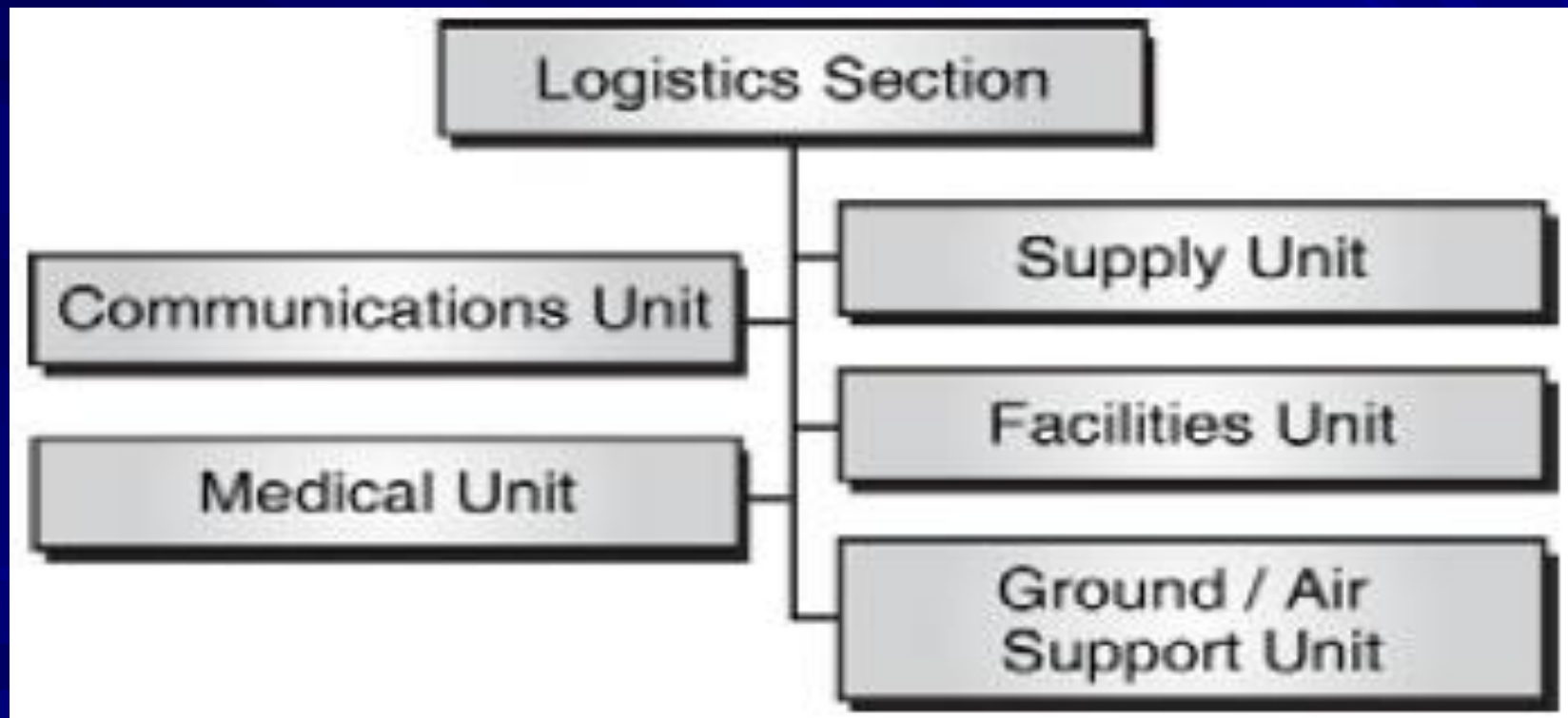
**Accountability**

**Incident Action Plan**

# ICS Organization



# ICS Organization



# **Key ICS Processes & Procedures**

**Mobilization, Deployment and Check-In**

**Responsible Supervisor**

**Capable Team Members**

**Coordination**

**Integrated, Clear, Accurate Communications**

**Realistic Orders & Instructions**

**Record Keeping**

**Debriefing**

**Demobilization, Check-Out, Go Home**

## Key ICS Procedures and Procedures

Mobilization, Deployment and Check-In  
Responsible Supervisor  
Capable Team Members  
Clear/Accurate Communications  
Execute Orders & Instructions  
Record Keeping  
Debriefing  
Demobilization, Check-Out, Go Home

# SAFETY



# Common Causes of Injury & Fatality

**Poor** Plans

**Faulty** Procedures

**Weak** Training, Exercise and Evaluation

**Unreliable** Logistics / Supplies

**Malfunctioning** Equipment

**Lack of** Teamwork

**Inadequate** Supervision

**Issues of** Personal Readiness and Commitment

# Exercises Help Identify and Fix

**Poor** Plans

**Faulty** Procedures

**Weak** Training, Exercise and Evaluation

**Unreliable** Logistics / Supplies

**Malfunctioning** Equipment

**Lack of** Teamwork

**Inadequate** Supervision

**Issues of** Personal Readiness and Commitment

## Exercises Help Identify and Fix

*Poor Plans*

*Faulty Procedures*

*Weak Training, Exercise and Evaluation*

*Unreliable Logistics / Supplies*

*Malfunctioning Equipment*

*Lack of Teamwork*

*Inadequate Supervision*

*Issues of Personal Readiness and Commitment*

ONLY IF

# Exercises Help Identify and Fix Issues

*Only If issues and problems are seen & documented*

*Improvement action is taken*

*Lessons are really learned*

*New plans & procedures are retested*

**Over to You:**

***What do you need tonight to be successful in your  
role as an ARES Communicator ?***

**Information ?**

**Training ?**

**Equipment or Supplies ?**

**Guidance ?**

**Something Else ?**



# Questions for You:

**Who authorizes you to deploy?**

**Where do you deploy and what do you take with you?**

**How do you check in when you arrive?**

**What is the chain of command and to whom will you report?**

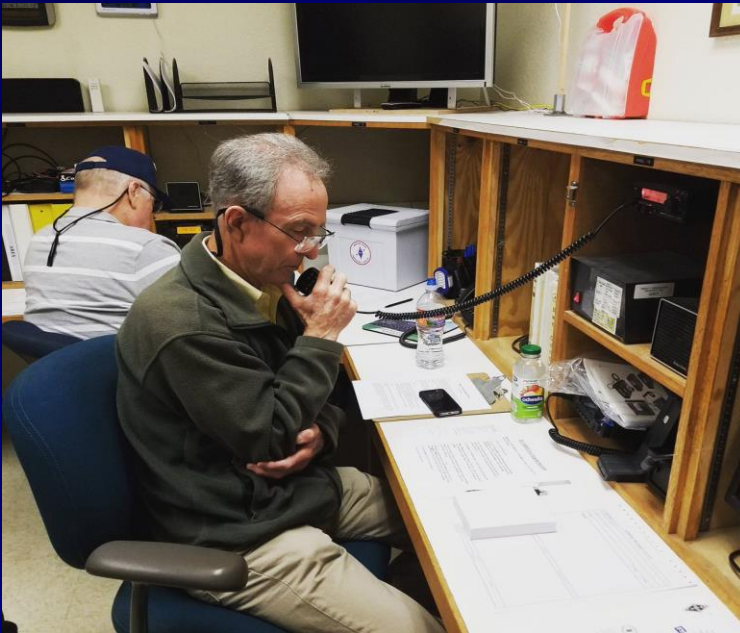
**What will be your duties?**

**Who authorizes you to demobilize and leave?**

**How do you check out?**

**How do you report problems, solutions, lessons-learned?**

# What Emergency Managers Usually Want



# What EMs Might Really Need



*...If only they knew we could do it*

# ***Contact Information***



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