

POWER OUT!!

March 30, 2019 Simulated Emergency Test

After-Action Report and Improvement Plan v. 1.0

April 10, 2019

ACKNOWLEDGMENTS:

Power Out!! was a formal exercise of the Alachua County Amateur Radio Emergency Service (ARES). Power Out!! included elements and activities never before seen in one of our ARES events. For example, Jim Carr, XXXX, provided an air operations (drone) component of the exercise – a first for Alachua ARES!. And the exercise wasn't just limited to hams: James Snyder, Stefanie Dowling, and Jessica Awad, all colleagues of Susan Halbert, KG4VWI (one of the two event organizers) came out in support of the ham community by playing roles that brought exercise narratives to life. They used FRS radios to read and act scripts that injected key information in to the exercise play. In another case of such non-ham support, one of our “actors” played a role at an operating location by providing rumor, hysteria and unvetted information. This was but one of the challenges the hams had to deal with. Without our volunteers from the larger community, the hams could not have learned what they did. Our thanks go out to them for a superb job!

Santa Fe College permitted us to use their grounds as one of our three operating locations. Mr Nick Hauzer graciously secured permission for us to use the Gainesville Senior Center (a designated County emergency shelter) as another of our operating sites; and he came in on his day off from work to ensure the building was open and we had everything we needed. Thanks!

Alvin Osmena, XXXX, agreed to act as an Incident Commander at the Santa Fe site – he had never attempted any such thing before, and his courage and willingness to stretch himself are here recognized. Along those lines, David Huckstep, XXXX, agreed to take on the function of Net Control at the Alachua County Emergency Operations Center. He had never before handled an amateur radio net, and with the assistance of Jeff Capehart, W4UFL, quickly developed and honed his net control skills. This is in the finest tradition of amateurs – problem solvers unafraid of leaving their comfort zones to increase their skills and abilities.

Finally, our thanks go to Lt Kevin Rulapaugh of the Alachua County Fire and Rescue Service, who deployed the area mobile public service radio unit and a number of Fire and Rescue personnel. They provided invaluable interoperability training – as public service professional communicators – working together with our amateur radio operators. In addition to the above, there are others who deserve to be thanked for their kindness, assistance, and permission. We know why you are and appreciate your fine service!

EXERCISE POWER OUT!! OVERVIEW

Power Out!! was originally planned for execution on October 13, 2018. It was then going to serve as the Alachua County 2018 version of the American Radio Relay League's (ARRL) annual Simulated Emergency Test (SET). So why was Power Out!! actually held in 2019? Because reality trumps all. It so happened that week in October also saw Florida landfall of Hurricane Michael, an exceptionally powerful almost-Category 5 hurricane. Michael's arrival on the Florida Panhandle called for an all-hands-on deck response by Florida first-responders – and by Florida's amateur radio operators. The two

Power Out!! organizers, Susan Halbert, KG4VWI, and Leland Gallup, AA3YB, recommended postponing the SET, which was agreed to on October 10, 2018. They and Shannon Boal, XXXX, another ARES member, immediately began their preparations for an eventual deployment to Panama City Beach, FL, in support of Hurricane Michael disaster operations.

Power Out!! was initially scheduled for January, 2019; but it was once again postponed because the Alachua ARES community's extremely full calendar of training and other events that month. After all that early 2019 activity calm, Power Out!! could be held in late March, with the hope for good weather and a good turn-out of hams to participate.

Exercise Power Out!! was a deployment exercise that foresaw amateurs operating at three different sites in Alachua County. The exercise and scenario were written in HSEEP format. There were timed injections of information in the exercise “play,” and a concurrent acting out by volunteer non-hams of a script in support of the exercise narrative. There was involvement of a public service agency (the Alachua County Fire and Rescue).

The exercise organizers drafted a suite of ICS planning and exercise control documents in support of Power Out!! These included the ICS-201, 201, 205, 205a, and 206 among conventionally encountered documents, but in addition included the ICS 220 for air operations. Members were given copies of and asked to use standard messages forms such as the ICS 213 and the Radiogram. The event organizers also wished the participants to use ICS 309s to record digital traffic.

Although the principal planning documents were posted on the North Florida Radio Club's website before the exercise kick off time, the exercise had been publicized in the Alachua ARES community via ARES meetings, a meeting of the Gainesville Amateur Radio Society (GARS), and by announcements on the Alachua ARES net, there was no briefing session for exercise principals the day before. There was no attempt before the exercise to “pin down” participants willing to undertake specific tasks – or just to show up – by means of sign-up sheets. Recruiting participants was done on a more ad hoc basis, by email or agreements secured at ARES meetings. As a consequence, apart from limited number of assignments to specific functions, Power Out!!'s organizers did not know exactly who would appear, to do what, with what equipment, skills, or abilities.

TIMELINE

The event organizers began the Power Out!! in brief for all exercise participants, and used a sign-in to record the 20 hams and non-ham volunteers who The event organizers used a sign-in sheet to record the 20 participants. They conducted the in brief at the Gainesville Senior Center, which was one of three exercise locations, and by far the best suited for an exercise overview for all “players.” Leland, AA3YB, went over the ICS-201, 203, and 205 suite of documents. Susan, KG4VWI, briefed the scenario and details of the exercise narrative and task list from the ICS-201.

Each principal at one of the three operating locations received a clip board and were informed that the clip boards contained hard copies of all ICS planning documents, and blank ICS 213 message forms and Radiograms. Each principal was given a USB thumb drive with all the ICS files and other information as pertinent to a particular location. Envelopes for injections in to play were prepared and given in hard copy (???) to principals.

FRS radios were provided to persons deploying with the team assigned to Santa Fe College grounds – COMMS 1/Incident Commander. Lt Kevin Rulapaugh of Alachua County Fire and Rescue attended

the briefing and heard exactly what the amateur radio participants heard, and also received a clipboard/document hard copies/thumb drive.

Following the event organizers in the briefing sequence, Vann Chesney, AC4QS, conducted a safety briefing using an ICS-206 form – again, provided in both hard copy and electronic file format to the location principals.

After the briefings, participants were divided in to teams. Those assigned to the Santa Fe College grounds location were designated COMMS 1. That is where the Incident Commander operated, along with the aviation operations (drone) section. Personnel assigned to the Alachua County Emergency Operations Center (EOC) were designated EOC/Net Control. The third location, the Gainesville Senior Center itself, was designated COMMS 2. MARC personnel separately deployed at COMMS 1 and near to COMMS 2, with a representative also assigned to the EOC.

EXERCISE SCENARIO

There is a wide-spread infrastructure failure. Grid electrical power, the internet, and satellites do not work. It does not seem to be an EMP, because batteries, solar, and generators work, and can be used for field and EOC comms.

For the purpose of this exercise scenario, Santa Fe College zoo has had an escape. The zoo's electromagnetic cage locks released when the power went down. An unknown number of wild animals, some potentially dangerous, have gotten loose. A team of search and capture employees (and other individuals) is on the scene near Santa Fe. They are not HAMs, but they maintain lively communication over their own FRS radios. Moreover, the local MARC unit has deployed to the site to provide Alachua County local government communications infrastructure. Alachua ARES will deploy air operations drone to assist in search.

Officials have taken some local residents (student actors and others) to a shelter to stay out of harm's way. Among these are persons with medical conditions requiring electricity for care.

TASKS

08:15	Receive briefing at Senior Center (centrally located) (scenario envelopes distributed)
09:00	Deploy antennas, radios etc. stand up Emergency Net; FIRST envelopes at IC, EOC, and shelter
09:30	IC requests status report from the zoo; contact with net control established for both remote locations
10:00	Shelter WIFI active and enabled; first public bulletin posted; SECOND envelopes at IC and shelter
10:00	Shelter location comm network established
11:00	THIRD envelopes at IC and shelter
12:00	End of SET; breakdown of equipment and logistical wrapup
13:00	Lunch (La Fiesta, 9513 NW 39 th Ave, Gainesville, and hotwash

GOALS AND OBJECTIVES

1. Assess the ability of the ARES group to stand up an emergency ARES net, sending formal and informal traffic by voice and digital communications between the EOC, a shelter, and an evolving field situation

This objective will address core capabilities:

- a: Mobile communications assets/skills
- c: Communications between the EOC and the rest of the community
- f: Short message communications
- g: FEMA forms (ICS) transfer
- i: Traffic sending ability (voice and digital)

2. Assess the ability to set up and populate "Shelter A" WIFI with **vetted** information such that untrained volunteers can receive up to date information on their smart phones.

This objective will address core objectives:

- c: EOC communications with the community
- d: Becoming better known (making our capabilities more known to possible clients)
- h: Last mile communications

3. Assess the ability to deploy and care for personal and County equipment in a field exercise, with proper documentation.

This objective will address core capability g (FEMA and ICS forms), as well as the critically important ability to document time and equipment used so that our partners in the County EOC are able to respond to all questions and audits from FEMA after the event.

RESULTS

Safety. The exercise was carried out with no known injuries or serious events. Air operations conducted in accordance with guiding regulation and there were no mishaps. The Safety Officer reported no incidents.

Results as to analysis of what happened – well or ill- and alignment with goals and objectives, follows in greater detail below. The Hotwash summary is a non-organized free flow list of impressions gained immediately after the SET. It is given here in that format so that the impressions are not subjected to editorial biases.

Overall, it must be said that this exercise in large part disappointed. The problems encountered are themselves, though, a very useful incentive and marker for how to better Alachua ARES' competence and ability.

HOTWASH

Participants gathered at a Gainesville restaurant at approximately 1300. Participants coming from the EOC took longer to negotiate traffic. Leland, AA3YB, compiled a running list of issues raised by all participants during the course of the hotwash. The non-edited hotwash, recorded contemporaneously, is appended to this report. There were no formal written evaluations. Susan, KG4VWI, prepared in advance an evaluation matrix, and filled the matrix with input at the hotwash. That matrix is aligned with the goals and objectives of the exercise, and is attached.

Several participants sent emails to Leland, AA3YB, and Susan, KG4VWI, with their thoughts. Much of that material is itself extremely useful; it is also appended here, somewhat edited to remove private or sensitive information. The authors of this report believe that these fresh impressions are a very useful tool for assessing the successes and shortcomings of the "players," while the events were still fresh in their minds.

Lesson for the future hotwashes: Build in adequate time for all personnel to arrive at a centrally located hotwash site. Consider a written evaluation form that is focused and precise, and which requires moderate input from the hotwash attendees. Collect at the end of the hotwash and assemble later as a table of participant evaluations. These are valuable on-scene impressions of amateurs and volunteers in the immediate aftermath of the exercise.

ANALYSIS: WHAT WENT WELL, WHAT DIDN'T, WHAT IS TO BE DONE BETTER

[Editor note 1: what follows is an initial draft analysis. The format is rather free-form. This will be organized in a tabular form in a subsequent version, with goals and objectives aligned to specific tasks with specific results noted]

[Editor note 2: Susan, KG4VWI, has separate input that is invaluable but which was not included here. This input includes checklists used during the Hotwash to assess performance]

COMMS 1/Incident Commander assessment

What did NOT go well:

- Team membership not established before inbrief and deployment – no common understanding hampered efficient operation, especially in the face of issues/problems. No team internal organization.
- No pre-deployment meeting to establish roles/functions – confusion on site as to who was to do what
- Technical difficulties: lack of familiarization and malfunctions. Computer issues, difficulty of using

tuners, antenna analyzers, and problems with specific antenna (VHF, for example), delayed operating on the variety of frequencies and modes anticipated for the exercise

- Operating conditions. Not enough tables, chairs, and shading arrangements (canopies). Equipment was used while simply sitting on the ground
- Time constraints. Too little time to overcome issues and get to successful comms before the end of the exercise operating period.
- Confusion as to what the communicators were supposed to do. Needed better/precise direction as to exactly what messages were to be passed, to whom, in what format.
- Injects. Confusion as to envelopes, injects of information, and what to do with them. Organizers should have taken charge of directing attention to envelopes and flow, rather than expecting teams to follow the timeline set out in the ICS-201.
- Did not listen to FRS radios. Should have delegated responsibility in the team to listen to the FRS radios to understand what input was coming from that direction
- Input by organizers would have improved the team's focus on what was significant to the flow.
- Too much to be done by too few. So much time spent overcoming difficulty that the team was simply overwhelmed with tasks. No effective internal task assignment.
- Difference between tactical (summarized) and formal (exact message content) not emphasized in exercise directions, and not understood by operators.
- Team members so focused on technical issues that they lost sight of the simple principal that any communications mode that worked should have been used to the exclusion of others to get the job done. In other words, rather than trying to get HF to work, should simply have spent all effort on VHF traffic.
- Equipment not fully utilized. Because of no pre-deployment team organization and task the members did not comprehend that one of the team actually had a working HF voice system in his truck. Initial organization with inventory would have revealed full suite of assets.
- Message handling and protocols.
 - Confusion over proper message protocols and handling methods.
 - Lack of understanding of forms (such as the ICS-213 message handling boxes)
 - Transmission speed too fast for effective recording. Voice sends were 3x effective speeds.
 - Net procedures not followed. Net control should have sent traffic off the net; perhaps to the secondary repeater, thus freeing up the net.
- Situational awareness. There was none. IC did not know/ask for situation reports from COMMS 2 or the EOC; team "in the dark" about what was going on.
- Logistics chief (event organizer) should have intervened to emphasize modes/methods that were working and so better manage the overall exercise towards success with respect to specific objectives

What DID go well:

- Comms eventually established by IC/COMMS 1 on HF, VHF, and in both phone and digital modes
- Technical difficulties resolved so that communications were largely put in place by one hour marker before end of exercise
- Members understood the need for internal direction, organization, inventories of equipment and member technical authorization and skills, and managed ad hoc to overcome these issues
- Messages were, in fact, relayed, and common protocol workaround established.
- ICS-309s recorded for digital traffic. This was a success, given the computer problems encountered!
- Phone messages. As team's ability cohered, two to three phone messages passed.
- Message from outside Alachua successfully received and passed.
- Given not much more exercise time, (an hour or so?), equipment and protocol issues would have been overcome and there would have been a better information flow.

COMMS 2 assessment

What did NOT go well:

- Managing the digestion and analysis of information flowing in from the "rumor mongers."
- Communicators swamped with the process of sending and receiving messages; could not and did not act as independent assessors of incoming data for passing on to the other locations of the net in general
- Net control not established in timely fashion, so COMMS 2 operators had to step in and set up a net rather than act as a node in the net [this is both a thing that did not go well from the EOC perspective, but one that went well from the COMMS 2 perspective – adaptive operators adjusting to reality and responding
- Eventually a process for taking in information and handing off to communicators was set up, but this took too much time in the context of the exercise operations window of three hours.
- Too little time, in effect, for exercise, for getting response from EOC
- Lack of situational awareness, as it were
- Message handling
 - o Lack of agreed protocol
 - o Copy speed needs to be adjusted to ability of the receiving station
- [Editor note: do not know at this writing how many/what modes/with what success COMMS 2 achieved in sending/receiving messages]
- Too much demanded, too little time, too little practice. Participants swamped.

What DID go well:

- Comms were eventually established
- Process for dealing with information created and put in place (adaptation to reality demonstration)
- WiFi shelter system set up and ran well

EOC/Net Control:

What did NOT go well:

- Tunnel vision. EOC operators completely consumed by technical issues, so that no one person took charge and directed efficient division of duties
- Antenna. HF antenna took too long to raise, and was tangled/poorly functioning
- HF transceiver. Could not figure out how to use
- HF operations unsuccessful.
- Net not established soon enough; had to take over from COMMS 2
- Tunnel vision. Personnel swamped and did not focus on or look at, for example, tasks and information in the materials provided.
- Message handling. Lack of familiarity/awkward forms (ICS-213) meant information recorded ad hoc on paper and later transcribed
- Lack of focus/direction from the organizers. Not clear what was supposed to be done or when
- Too few personnel to effectively manage variety of frequencies and modes; too few personnel to perform important scribe duties.
- Need practice and training on message and traffic handling.
- Lack of familiarity with EOC HF and technical issues with both HF and VHF hindered effective and swift establishment of net or message flow.
- EOC too noisy for multiple voice operations without headsets.

What DID go well:

- Larry Rovak, XX2XX showed creativity in working home transceiver remotely to begin HF operations, but band conditions very poor
- Net operations eventually set up and message traffic passed.
- ICS-309 produced showing ten digital messages passed, including from out of county
- Although HF operations unsuccessful, VHF operations successful

MARC assessment:

What did NOT go well:

- Couldn't put up originally intended tower, but did finally put up TAC 36.
- MARC leader initially could hear but not be heard; Comms eventually achieved with shelter and Santa FE.
- Unable to hit EOC on portable. UTAC41 secondary.
- Equipment issues meant MARC personnel had to work with their tertiary 8call90.
- Conflict between two MARC repeaters; took time to figure out that two way comms could be used only if one repeater turned off
- Tech issues dictated that Lt Rulapaugh himself deploy to EOC; could not hear his teams
- "Cheated" and used cell phone to contact units – only then could the workaround for tactical comms be put in place
- Had to go to unplanned channels to establish and maintain comms
Once comms established information flow much smoother.
- Terrain limits. Ridge lines made comms over them problematic.
- "8 Call 90" is one that should work.
- Interoperability issues need to be worked through internal technical support channels to ensure that plans A through G plans in sequence can be used.
- Personnel: Too few personnel. Radio operators, scribes, and coordinators are all needed.
- Generator: failed on MARC unit; overcome with time, probably air lock,. Used Mobile Imaging Mapping Unit (MIMU).
- Didn't use commercial power.
- Didn't have digital comms modes; but they've got funding for two PACTOR IV modems.
- Our jobs should have been was pass messages; that's all. We were being asked to do more.
- EOC should transfer dispatch mission to ESF49.
- Communicators should not make judgment decision. Their job is to transmit and receive, not analyze

What DID go well:

- Effective tasking/delegating to other agencies with respect to FRS-revealed information
- Comms finally established and messages flowed smoothly
- Good working relationship with amateur operations locations; interoperability experience that will prove useful in the event of real emergencies

Event Organizer assessment:

What did NOT go well:

- Did not conduct pre-exercise briefing for principals, which meant that there was confusion and lack of understanding of mission, duties, or method of execution
- Exercise asked for too much from too many in too many modes
- Lacked precise direction and focus from controllers on what should happen
- Organizers did not secure effective participation list as of at least the day before so as to effectively assign/use personnel. This meant that leaders were not clearly task assigned and could not themselves effectively organize and manage their teams
- Not enough time in the exercise for participants to overcome issues and effectively communicate
- Technical issues.
+ Operators not fully understanding how to use all pieces of equipment

- + Operators not fully conversant with computer and software
- + EOC not able to function on anything other than VHF modes
- Difference between tactical and formal message handling not understood or developed in the message flow required
- Participants overwhelmed and not attending to all the sources of information (FRS radio input)
- Message handling needs practice on procedures and copy speed
- Net control techniques need improvement and practice

What DID do go well [from a macro perspective].

- Successful deployment of teams without mishap
- Successful interoperability with public service agency (MARC)
- More than usual number of amateur operators took participant
- Successful use of volunteers
- Employment of non-amateur radio frequencies and modes (FRS)
- Air operations used for first time, target found (“tiger”), location successfully relayed by air ops to ICS for further relay to wildlife control (volunteer) – interaction between amateur radio and FAA/drone radio control frequencies.
- Communications and message flow did in fact “gel” and if there had been more precise content for messages, more direction as to routing, by end of exercise marker there would have been an effective net and effective traffic flow
- Successful redeployment with no mishaps/injuries.

ANALYSIS OF SET OBJECTIVES AND GOALS

1. Assess the ability of the ARES group

to stand up an emergency ARES net **[M]**

to send formal and informal traffic by voice and digital communications between the EOC, a shelter, and an evolving field situation. **[Met by End of Exercise Period]**

This objective will address core capabilities:

a: Mobile communications assets/skills **[M as to IC and COMMS 2, n/a to EOC]**

c: Communications between the EOC and the rest of the community

f: Short message communications **[M]**

g: FEMA forms (ICS) transfer **[M by ICS/ U by EOC – had to use Telnet]**

i: Traffic sending ability (voice and digital) **[M]**

2. Assess the ability to set up and populate "Shelter A" WIFI with **vetted** information such that untrained volunteers can receive up to date information on their smart phones. **[S]**

This objective will address core objectives:

c: EOC communications with the community [M]

d: Becoming better known (making our capabilities more known to possible clients) [S]

h: Last mile communications [M]

3. Assess the ability to deploy and care for personal and County equipment in a field exercise, with proper documentation. [M] as to ICS forms; [U] as to documenting equipment on ICS forms; did not ask participants to do so, with one exception [inventory of FRS radios]

ANALYSIS OF CLUB GOALS

- Club Goal #7: So something simple every month for training. [M]. **Note: this was a full-scale exercise and so was not “something simple.”**
- Club Goal #11: Flesh out in real terms what the ICS courses teach. [S]. **Note: although this exercise achieved objectives in many cases only with major challenges, it did “flesh out” ICS course content in the context of a real formal exercise. ICS forms used and briefed, if not always or consistently followed. ICS format used for the development and execution of the exercise in a way that all participants saw and began to deal with.**
- Club Goal #21: EOC familiarization and “EOC 101” to increase cadre able to walk in to the EOC radio room and immediately begin work. [M]. **Note: Do not know properly how to assess. SET participants who went to the radio room had difficulties with HF antenna and transceiver and could not achieve effective HF work. VHF/UHF better, but in the end there was genuine success only on VHF. Clearly, there needs to be increased understanding/familiarization with the EOC suite of hard and software if the EOC radio room is to be a truly useful communication asset.**

IMPROVEMENT PLAN [NOTE: THIS IS A DRAFT; NOT ALIGNED BY CORE CAPABILITY, RATHER, THIS IS A HOTWASH+ IMPRESSION OF THINGS TO BE DONE BETTER]

1. Planning. Sign up sheets with assignment preferences before day of exercise (note: difficulty in getting volunteers to volunteer is a significant problem for formal exercise planners – they don’t really have an idea until the last minute as to who will be able to participate, with what license authorizations, with what equipment, and with what operating/computer skills).
2. Pre-exercise briefing for principals. This is not the table-top. This is a briefing that should be held the night before a formal exercise for the IC and leaders designated for whatever operating locations are in the plan. Having a pre-brief would do a lot to clear up confusion in participant’s minds as to what they are to do, and will presumably force them to really look at the essential ICS documents (especially the 201 and the 205/a). Leaders can then task organize based on who they think may appear the following morning for the exercise.
3. Familiarization. Strongly suggest “simply done” events – or ad hoc – simple weekend/evening sessions where ARES members should take equipment in to their back yards and actually test it with their deployment power source and antenna. Computers should have up to date software. Members doing digital should update VHF packet suited (easymodem and easy term) and Winlink for VHF and HF. Do this often enough so that the morning of the exercise there should be a good chance of being able to operate successfully and with skill – not having to “reinvent the wheel.” Time wasted overcoming equipment unfamiliarity or avoidable technical

challenges is time taken away from a successful exercise outcome for the operator and his/her team. Easier said than done, which is why informal, low-key, backyard ops, or even just often and very simple on-air phone contacts are critical. Do early and often. No stress.

4. Precise Controller direction. Exercise planners should reduce the amount of effort expended by communicators in trying to digest information. Use clearly defined messages, with clearly defined routing, with a clearly defined difference between tactical and formal. Controllers should intervene to redirect participant efforts if it is seen they are off-track. Recognize that our current ARES group level of skill, just handling messages given in precise form (formal) or with precise direction that content can be handled informally, is the way to go. Don't ask operators to be dispatchers.
5. Net operations. Develop skill with standard net control operations, especially for handling traffic. Do this by using the ARES Thursday night net, or by using the unscheduled ad hoc set-up-in-the-backyard or by means of informal on air sessions with the goal of improving member ability both to conduct and to operate in a directed net.
6. Traffic and message handling. We need to improve our ability to conduct phone message/traffic. Improve by using the ARES Thursday net or other forums to pass/receive messages using appropriate copy speed and agreed upon protocols. Recommend member use the NTC traffic school website in addition to actual on-air message handling. Recommend using both Radiograms and ICS-213 for increasing skill on the spot. Use hard copies printed out before hand. Understand the difference between tactical/informal and formal, and practice both. Again, this could be done first through the RES Thursday night nets.
7. Written evaluations. Leland, AA3YB, believes that pre-formed "check the box" evaluations to be distributed at an exercise hotwash may assist in better recording participant views while they are fresh. Recommend planners of future exercises use these.
8. Scope of Formal Exercises. Recommend aligning our exercises with what the actual ability of the Alachua ARES group is, and as it develops over time, and what Alachua ARES, as a group would likely be called on to do in a real emergency. If this means reducing the scope and scale of our exercises to accommodate the members who can really support them, so be it. Asking members to use too many modes, too many frequencies, with too many documentary requirements, and overcome too many competing requirements, may do no more than set them as individuals, and the exercise, up for failure. This risks breaking the morale of ARES members and quite frankly driving them off. Development requirements for our full-up ARES goals needs to take in to account how many people we really have, and what they really are willing and able to do. This what "take as we find them" means.