

Instructor Notes to Accompany SOP PPT

Slide 1 – Title Slide

It is the intent of this training to educate a responsible end user from each agency in Berks County that utilizes the Berks County DES services and it's radio system..

Responsible representatives from each agency are required to go back to their respective agencies and educate them on the Operating procedures set forth by DES.

The manual provides detailed descriptions of multiple operating procedures and should be read in its entirety by all system users. (**STRESS READING MANUAL**)

Slide 2 – Training is Crucial!!

- ALL systems users will be trained how to operate the new radio system. It has incredible new capability but is also is very complex. Training is essential for all system users in order for the system to work properly. It is only as good as the users operating it.
- New technology requires all of us to branch out of our comfort zones and know how this is going to work for all users, not just our own. Fire must understand police and vice versa, county and city must understand each other. The better we understand one another, the better we are prepared to service our community.
- This training is not to replace reading the manual. It is to help you better understand what you are reading and be able to re-teach it to your agencies. Allow them to read the manual and ask questions. If you are unable to answer a question, ask one of the DES staff.
- When changes and modifications occur, an email will be sent out. It is imperative you maintain a current email address on the DES website listserve. Anyone is allowed to register for emails. This will ensure timely and effective distribution of important information pertaining to the SOP.

SLIDE 3 - Section 3 – General Radio System Operations and Security

- All system users should be aware of these 4 important points right out of the gate.
- Only authorized users may access the system with the proper equipment. If the radio system is used inappropriately, rights to access system may be inhibited.
- A lost, stolen, or missing radio causes concern due to security risk (encrypted talk groups). Any type of system trouble shall be reported to DES watch officer as soon as possible. The following information should be provided if possible:
 - Location where problem occurred
 - Detailed explanation of the failure or problem
 - Radio ID for the subscriber unit
 - Any other important information
- The sooner a problem is reported the sooner trouble shooting can begin and a resolution started.

WO Contact Number 610-655-4931

Slide 4 – Conventional vs. Trunking

- A good analogy is to think of a Conventional (non-trunked) radio systems work more like a supermarket, where customers queue up behind a checker that they choose.
- A trunked radio system works like the waiting line in a bank. Customers typically wait in one line for the next available teller.

Slide 5 – Trunked System Talk Groups

- Radio talk group/channel classifications is located in section 3 – RADIO TALK GROUP/CHANNEL CLASSIFICATIONS of the manual.
- Dispatch talk groups will only receive transmissions, and are used for dispatching disciplines to incidents.
- Hailing talk groups are the primary communications path between users and radio operators. Hailing talk groups will be addressed in greater detail later on.
- Operations talk groups are used for major incidents, pre-planned events, or extreme business and traffic must be moved off the hailing channel. There are a limited number of Ops Talk Groups available so use and must be coordinated with the radio operator. At the completion of incident the IC must advise the radio operator that the Ops Talk Group is again available.
- Administrative talk groups are essentially equal to the current local frequencies. These are not monitored by DES but they are recorded.
- Each talk group will be discussed for each discipline in greater detail.

Slide 6 – Other Radio Talk Groups

- Conventional Interoperability channels allow for out of county mutual aid units to communicate with county units on the incidents. A permanent patch exists between the old frequencies and the new talk groups.
- Currently, Lancaster County is the only adjoining county we do not have interoperability with.
- Both Conventional interoperability and tactical channels will be addressed in greater detail as we come across them in each discipline.

SLIDE 7 - Section 2 - 4 pages – Continuity of Operations

- **All field users and system users are highly encouraged to keep personal contact information up to date with agency leaders.
- **Agency leaders are highly encouraged to keep their personal contact information up to date with the DES Watch officer staff to make sure notifications of outages can be made in a timely manner.
- Any system user who's radio displays "site trunking" or "fail soft" needs to immediately contact the DES on duty watch officer.

SLIDE 8 – TITLE SLIDE

An overview of topics we will be discussing in the next several slides.

Starting in section 3 of the manual, 5th topic.

SLIDE 9 – SECTION 3

FCC Regulations

- Be professional at all times and refrain from using and profane or obscene language.

Radio Etiquette / Professionalism

- Be concise as possible.
- Use and manage emergency function appropriately when activation is made whether real or accidental.
- Concerns with the conduct of others should be pursued with offender or his/her organization's leadership.
- If problem is pervasive or can't be resolved, report to Watch Officer.

SLIDE 10 – Section 3 – Approved Agency and unit identifiers

- POLICE: Non-Reading law units operating on Reading TGs (RdgXXXX0 they will use "County" in front of agency/unit ID (e.g., County 25-91). Reading law units operating on non-Reading TGs will use "City" in front of unit ID (e.g., City 306)
 - EMS: Units operating across TGs (City and County) need not preface normal identifier (e.g., Reading Fire Medic 1 will use "Medic 1" regardless of what TG they are on and Lower Alsace Ambulance 1 will use "Ambulance 555-1" regardless of what TG they are operating on).
 - *Applies to Western Berks EMS, Southern Berks EMS, and Bethel
 - FIRE: County fire service identifiers use organization number and apparatus or unit position identifier. Non-Reading fire units on Reading TGs (RdgXXXX) use "County" in front of agency/unit ID (e.g., County Engine 55-1).
 - Reading Fire: service identifiers are the same except that, when operating on Reading (RdgXXXX) TGs they will not transmit organization identifier. Reading fire units operating on non-Reading TGs use "City" in front of their unit ID (e.g., City Engine 1)

SLIDE 11 – Section 3 – Urgent Traffic

Examples of use of URGENT TRAFFIC include:

- Notifying another of a safety issue that could affect the other.
- Notifying DES of an unreported emergency.
- DES notifying User of additional information received from a 9-1-1 caller when delay could have negative impacts

4 part messages:

- User transmits the words "**Urgent Traffic**" following their hail (unit identifier).
- Example: "**Berks, Chief 1, Urgent Traffic**"
- Caller shall not proceed with transmission until acknowledged.

SLIDE 12 - Section 3 – SCCP – Plan Charlie

Notifications

- EMS and Fire All Calls announcements: “Due to (reason for implementation) Plan Charlie is now in effect”.
- If text paging is available, countywide EMS and all Fire Zone All Calls text page groups will receive.
- Announcements will be made on discipline hailing channels for fire, police, and EMS.
- Agencies assigned to Administrative TGs MAY be contacted by radio or telephone to curtail radio operations.

Law Enforcement Process Modifications:

- Traffic on ALL TGs limited to essential traffic only. Use MCTs for status keeping.
- Broadcasts will not be performed unless a priority.
- Only essential queries performed by DES (MCTs must be used where available).
- Functions deemed non-essential by Watch Officer will be denied/deferred.

Fire/EMS Operations Process Modifications:

- Traffic on ALL TGs will be limited to essential traffic only including TGs not monitored by DES.
- When the cause for the SCCP is weather related, fire agencies are requested, but not required, to staff station and provide telephone contact information to receive non-emergent call notifications.
- No administrative announcements will be made
- Fire and EMS units will not be dispatched to calls for MVA UNKNOWN INJURIES except in PSP jurisdiction or on request of police.
- No summary of times or incident information be given over radio or telephone.
- Any function deemed non-essential by Watch Officer will be denied/deferred.
- DES will only make utility company notifications when an immediate threat to life or property exists.

SLIDE 13 - ADDITION OPERATIONS TALK GROUPS

AN OVERVIEW OF OPERATIONS TALK GROUPS AND THEIR FUNCTIONS IN THE DES RADIO SYSTEM

Slide 14 – Tactical Channels

- All non-Reading and Reading agencies will use Tac1 without having to coordinate it through Berks Radio Operator.
- Tactical channels are very low powered channels that allow for on-scene communications. All public safety radios are equipped with tactical channels.
- If request for a tactical channel is requested via the RO, the RO will assign Tac Channels starting with 2 and work up to 12. If a field user is looking to obtain a Tac Channel on their own due to being in an area where they are unable to contact DES RO they will then start from 12 and work down to 2, until a channel is located. The Incident Commander (IC) shall key up and announce “XXX Incident Command to any unit on

channel, respond if this channel is in use?" If any traffic is detected on the channel after such a selection is made, the Incident Commander shall be responsible to move to another channel.

- Once IC finds a usable channel, they will advise DES of the TAC channel being used.
- Significantly small sphere of operation: working incident in Bethel on Tac1 and a working incident in Amity on Tac1 will not interfere with each other or be heard.
- Tactical channels are not recorded or monitored by DES but coordinated through Radio Operator.

SLIDE 15 - Section 3

Disaster Operations Talk Group

- Use of disaster TG is coordinated through DES / recorded in DES, not monitored by DES except on special notifications requests

Countywide exercise Ops.

- Agencies are required to obtain authorized use of the channel from DES by written request.
- DES will only monitor if deemed appropriate.

SLIDE 16 - Section 3

Public Works Ops TG

- All public safety radios provisioned on the system have access to these Talk Groups.
- 13 TG's available for expansion. (4 North, 8 South, 1 County wide)
- Put in place to minimized inconvenience and cost of radio reprogramming for future use.
- These Talk Groups are intended for future expansion and shall not be used without explicit direction from DES

SLIDE 17 – SECTION 3 – Special Operations TG

Non-Reading Agency Specific Ops TG

- The use of these Talk Groups need not be coordinated through DES.
- Policies and practices with respect to the use of these Talk Groups (to the extent they are needed) shall be developed by the respective agency or user group that the Talk Group has been provisioned to support.
- Must comply with any overarching policies set forth by DES and FCC regulations
 - Non-Reading Agency Specific Operations Talk Groups are recorded and avail on the console system but not monitored by DES.
- Complete list in manual, section 3. Also lists what radio's each agency is available in.
 - Ex Coro in LEO radios not all public safety radios. List encryption status listed.

SLIDE 18 – SECTION - Special Operations TG

Reading agency specific operations TG

- Complete list of agencies, encryptions and availability found in section 3 of the manual.
- Not monitored by DES but recorded and available on the console.
- The use of these TGs do not need to be coordinated through DES.

- Policies and practices with respect to the use of these Talk Groups (to the extent they are needed) shall be developed by the “owner” agency.
- All use of these Talk Groups (and any third party developed policies regarding their use) must comply with any overarching policies set forth by DES and FCC regulations, and those persons developing such policies are encouraged to engage DES management for review prior to issuing such guidance.
- DES reserves the right to rescind this privilege at any time it is deemed that the agency developed procedures are inadequate or are not effective in accomplishing the intended purpose of the Radio System.

Telepatch :A landline call into DES that can be patched to a Telepatch Ops TG . ADP refers to the type of encryption, ADP is base line encryption.

SLIDE 19 - Section 3 -Countywide Intraoperability Administrative TG

- Is recorded and available on the console @ DES but not monitored.
- Intended to be a single location at which any System User can reach any other System User.
- Call should be moved to a mutually decided alternative TG after making contact to avoid extraneous chatter.
- Broadcast in both Sites; NOT Encrypted.
- If Users do not scan this TG in their Scan List, then they will not be able to hear potential callers.

SLIDE 20 – Section 3 - County Emergency TG

A County Emergency Talk Group has been provisioned. This Talk Group called County EMERG (County Emergency) is intended to be a single location to which any System User initiating an EBA on a Talk Group that meets three parameters is automatically redirected.

Those parameters are:

- The Talk Group the System User is on when the EBA is initiated is not configured for Tactical Emergency (said another way, it is a Revert Emergency Talk Group).
- The Revert Emergency Talk Group the User is on when the EBA is initiated is not primarily utilized by City of Reading System Users. These Talk Groups Revert to the Talk Group Rdg EMERG (Reading Emergency).
- The Revert Talk Group the User is on when the EBA is initiated is not configured to Revert to some other specific Talk Group as set forth in User agency policy (this is generally only applicable for Talk Groups that are Agency Operations Talk Groups)

SLIDE 21 – SECTION 3 – READING EMERGENCY TG

A Reading Emergency Talk Group has been provisioned. This Talk Group called Rdg EMERG (Reading Emergency) is intended to be a single location to which any System User initiating an EBA on a Talk Group that meets three parameters is automatically redirected.

Those parameters are:

- The Talk Group the System User is on when the EBA is initiated is not configured for Tactical Emergency (said another way, it is a Revert Emergency Talk Group).

- The Revert Emergency Talk Group the User is on when the EBA is initiated is primarily utilized by City of Reading System Users. Other (non-Reading) Talk Groups Revert to the Talk Group County EMERG (County Emergency).
- The Revert Talk Group the User is on when the EBA is initiated is not configured to Revert to some other specific Talk Group as set forth in User agency policy (this is generally only applicable for Talk Groups that are Agency Operations Talk Groups)

SLIDE 22 – TITLE SLIDE

OVERVIEW OF SYSTEM FEATURES AND HOW THEY WILL OPERATE AND BE HANDLED

SLIDE 23 – SECTION 3- Scanning

Each agency should be familiar with the scanning features of their radio.

Mobile radio differ from portable radios:

- Mobiles have feature called “Scan On/Off Hub.” If radio is scanning and the operator removes the microphone from the clip (hub), radio can be programmed to either continue to scan or stop scan scanning.
- Scanning is “Off Hub” or “On Hub”. Regardless of whether the radio continues to scan or stops scanning, when the user pushes the PTT button, they are transmitting on the Channel or TG to which the radio is actually affiliated.
 - All City Disciplines and Co EMS will NOT scan when off HUB
 - County Fire & County Law Enforcement will continue to scan when off HUB
- Minimizing the total number of Scan List Members to only those absolutely necessary to be monitored reduces, BUT DOES NOT ELIMINATE, the possibility of missing important traffic.

SLIDE 24 - Section 3 – DVRS – revised JUNE 1

- A radio repeater that accepts an input from portable radios on a conventional channel and retransmits input over a connected mobile radio set to a specific TG, In the reverse, a signal received on the TG is then relayed through the DVRS and out over the conventional channel to portable radios in range of the DVRS.
- Not all agencies purchased a DVRS.
- However, all public safety portables are programmed with the 3 DVRS channels.
- 8MobRPTR1-3 (all portables have DVRS capability)
- It is the responsibility of the IC to ensure that all personnel switch over to the correct DVRS channel.
- Link between portable and DVRS cannot be encrypted

SLIDE 25 – SECTION 3 – Busy Process

- Note: System busies are not expected to be frequent occurrences.
- Additional push to talks will move you to the end of the queue (be patient wait to talk)

SLIDE 26 - Section 3 – Talk Timer

- Tone is audible to User but will not interrupt transmission.

- If unable to complete transmission in 4 seconds, User shall say “Stand-by for Additional,” unkey radio, and immediately PTT again to continue.
- Other Users on TG should recognize “Stand-by for Additional” to mean further traffic is intended and should not attempt to access talk path.

SLIDE 27– SECTION 3 – EMERGENCY BUTTON ACTIVATION

- Users whose radios are on the TG will receive an audible and visual notification of the emergency. (If other Users are not monitoring TG where emergency was initiated, they get no indication unless they switch into TG.)
- The word “**EMERGENCY**” will display on the radio in an orange bar or with orange backlighting. As well as the ID of the radio in emergency or alias of the radio.
- Depending on how a TG is programmed, the EBA will either remain on the TG or be switched to a monitored TG called an Emergency Revert TG. Appendix E shows a list of how EBA’s are handled.
- Once the EBA is sent, until the radio emergency is reset by the User, every PTT from the radio will “reinitiate” the emergency.
- If User sends EBA and changes to another TG and PTTs, it will send an emergency on that TG.
- Emergency Resets -- User must perform a long button press (approx. 1.5 sec.) on emergency button. EMERGENCIES CANNOT BE RESET BY DES.
- EBAs are only acknowledged on console by the Radio Operator handling the emergency.
- Verified Activations
 - Radio Operator (DES or City PD) contacts unit to verify the activation by transmitting the call sign of the unit, the phrase “Echo, Bravo Alpha” (emergency button activation), and “location.”
 - **“26-1, Berks Echo-Bravo-Alpha, location?”**
 - Only one of two responses acceptable to this inquiry—verified with information provided or “Accidental”.
 - Accidental activation responds with “Accidental” and no further information or details.
 - **“Berks, 26-1 Accidental.”**
 - Unit then resets emergency button.
 - Any response other than “Accidental” (including a response that includes additional details)
 - e.g., **“Berks, 26-1 Accidental, everything is OK here, sorry”**, shall be considered to be a Duress EBA, and law enforcement WILL BE mobilized if User’s location is known. If the location is not known, the Communications Center shall reply as though it is understood that everything is OK and inquire as to location.
 - **“26-1 Berks, copy accidental activation, everything is OK, your location for the logbook.”**
- Coordination of units responding to Duress EBA must not be completed on TG where the EBA is completed to avoid making the attacker aware of the coded response. For this same reason, it is crucial that the unit under duress deactivate scan functionality.
- User intentionally activating will respond with details.

- Verified Intentional EBA From A Unit on Location With Other Units Capable of Offering Assistance
 - DES ensures that IC received EBA and is aware of the situation.
- Verified Intentional EBA From A Unit on Location w/o Other Units Capable of Offering Assistance
 - DES ensures that IC received the EBA and is aware of the situation and mobilizes additional resources.

SLIDE 28 - Section 3 - Emergency Button Activation – Unverified Activation

- Activations From Units Where Follow-Up Contact Is Not Made (Unverified Activation)
 - Units On Scene Without Other Units
 - DES attempts to make contact with User and unit does not respond, a second attempt is made.
 - After a second attempt with no contact, situation is handled as a failed second security check.
 - Specific actions determined by the ability locate User activating EBA.
 - Units On Scene With Other Units
 - DES attempts to make radio contact with User with no response, a second attempt is made.
 - After a second attempt with no contact, DES ensures IC received EBA and is aware of the Unverified EBA.
 - DES support provided as requested by IC.

SLIDE 29 – SECTION 3 – EMERGENCY BUTTON ACTIVATION – Unverified EBA’s

Unverified EBA’s =The ability to respond/coordinate a response to EBAs from these Users that are unable to be verified is highly limited due to a lack of awareness about any specific unit’s location or assigned work.

- These TG’s are used for Day to day operations and users do not keep status with DES.
- **NO GPS exists in any of the radios on this system!**

SLIDE 30 – SECTION 24 – EMERGENCY BUTTON ACTIVATION – JAIL & IFS

Appendix E – Talk Group Data Summary – lists all the TG’s and how EBA’s are handled.

Agencies must maintain a telephone contact list for supervisory personnel on file with DES.

SLIDE 31 - SECTION 3 – Emergency Button Activation – When to call 911

EBAs shall not be initiated in order to:

- Notify others of an escalation of an incident that does not represent an immediate threat to the System User’s personal safety (eg. a verbal altercation between two individuals becomes physical but is between the individuals and does not involve the System User).
- Notify others of possible hazardous conditions.
- Advise others that the System User is intentionally entering a hazardous situation.
- Notify DES of an emergency requiring an initial dispatch or call to service.

Slide 32 – Questions ?