Broward Sheriff's Office Regional Communications

Presented by

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Agenda

Dispatch Operations and Using the Broward County Radio System

Independent Radio Systems

Achieving Interoperability, Critical Incidents, and Disaster Contingency Plans

Dispatch Operations and Using the Broward County Radio System

- Dispatch Workflow and CAD Unit Recommendations
- Field Users and Portable Radios
- Gold Elite Presentation and Talkgroup Display
- Patching and Multi-Selecting
- Using the Fleetmap
- Radio Resource Allocation and Limitations

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Dispatch Workflow

CAD Event Generated by E911 Operator

CAD zones call based upon address entered and forwards to correct Dispatcher

Dispatcher receives call in CAD "Pending Queue" and assigns

Unit Assignments

- DLE and FR events will supply a "Run Card" unit recommendation
- Run Cards will _always_ provide for:
  - Exact Number(s) and Type(s) of Units (_Capability_) to send to the call based upon the Call Classification (Signal Type) submitted
  - Escalation Order (Stations or Zones) for unit assignment
  - Recognition of any omission of unit due to insufficient availability
- Run Cards can _also_ provide for:
  - Automatic notifications to surrounding dispatchers of critical event and/or critical updates
  - Automatic paging/email alerts based upon event type and location

CAD Call Assignment Presentation

Dispatch Cadence

- Standard Unit Assignment (DLE or FR) will include:
  - Unit(s) to be assigned
  - Location of occurrence
  - Nature of the Emergency
  - Comments/Notes entered regarding the call
  - Confirmation of Sgt/Battalion Chief acknowledged (where appropriate)
  - Any Critical Safety Flags/Hazards present at the location (previous history)
  - Event Case Number
  - Time of Call Assignment

Field Users Portable Radios

Field User Portable Radio

- Talkgroups are radio "channels" utilized by DLE/FR for communication to dispatch and their talkgroup partners
- Talkgroup access varies, and is based upon radio *fleetmap programming*
- Fleetmap programming can differ amongst the users of the Regional System
- **All fleetmaps have both zone specific and county-wide talkgroups**
- Impacts of fleetmap differences:
  - Nomenclature of talkgroups
  - Position of talkgroups per zone
  - Accessibility to unique/agency specific talkgroups

<u>Portable Radios can have hundreds of talkgroups programmed</u> **based upon the user's position and rank (ie. specialized areas or command levels)**

Field User Portable Radio

Primary Talkgroup:

- Field users communicate daily assignments on a primary talkgroup (channel)
- Alternate talkgroups are often used for ancillary services (Teletype/Support) and for tactical events (critical incidents) as needed
- Alternate talkgroups are pre-programmed into the main zone to prevent field units from manually moving onto different zones
- Dispatch will have access via Gold Elite Console to these commonly used talkgroups

Zones:

- Portable radios can maintain **16 talkgroups per zone**
- The radio can support numerous zones, based upon the radio model and fleetmap program applied
- Inter-zone talkgroups can either by system-wide (shared) or unique to the zone
- This enables agency specific activities as well as county-wide activities to be conducted efficiently

Fleetmap Sample

|	Zone 2			Zone 3	
	FT LAUD INTL AIRPORT, DANIA, SEAPORT			WESTON, SW RANCHES, COOPER CITY	
CH	DESCRIPTION	NAME	CH	DESCRIPTION	NAME
A	BSO DISPATCH	BSO-02-DISP	A	BSO DISPATCH	BSO-03-DISP
B	BSO BRAVO	BSO-02-BRAVO	B	BSO BRAVO	BSO-03-BRAVO
C	BSO CHARLIE	BSO-02-CHARL	C	BSO CHARLIE	BSO-03-CHARL
D	BSO DELTA	BSO-02-DELTA	D	BSO DELTA	BSO-03-DELTA
E	BCA BCAD	BCL-BCAD	E	BSO ECHO	BSO-03-ECHO
F	BSO HEADQUARTERS	BSO-HQ	F	BSO HEADQUARTERS	BSO-HQ
G	BSO TELETYPE	BSO-TTYPE-1	G	BSO TELETYPE	BSO-TTYPE-1
H	BCM DLE/FD COMMON	BCM-DLE-FD	H	BCM DLE/FD COMMON	BCM-DLE-FD
I	BC DLE MUTUAL AID OPS 13	BCM-CW-13	I	BC DLE MUTUAL AID OPS 13	BCM-CW-13
J	BC DLE MUTUAL AID OPS 14	BCM-CW-14	J	BC DLE MUTUAL AID OPS 14	BCM-CW-14
K	BC DLE MUTUAL AID OPS 15	BCM-CW-15	K	BC DLE MUTUAL AID OPS 15	BCM-CW-15
L	BC DLE MUTUAL AID OPS 16	BCM-CW-16	L	BC DLE MUTUAL AID OPS 16	BCM-CW-16
			#		
			#		
M	BC DLE MUTUAL AID JOPS 14	BCM-14-OPS14	# M	BC DLE MUTUAL AID JOPS 14	BCM-14-OPS14
N	BC DLE MUTUAL AID JOPS 15	BCM-14-OPS15	N	BC DLE MUTUAL AID JOPS 15	BCM-14-OPS15
O	STATE MUTUAL AID TAC1	8 TAC 91	O	STATE MUTUAL AID TAC1	8 TAC 91
P	STATE MUTUAL AID CALL	8 CAL 90	P	STATE MUTUAL AID CALL	8 CAL 90

Zone Specific

County-wide Shared

Dispatch Gold Elite Presentation
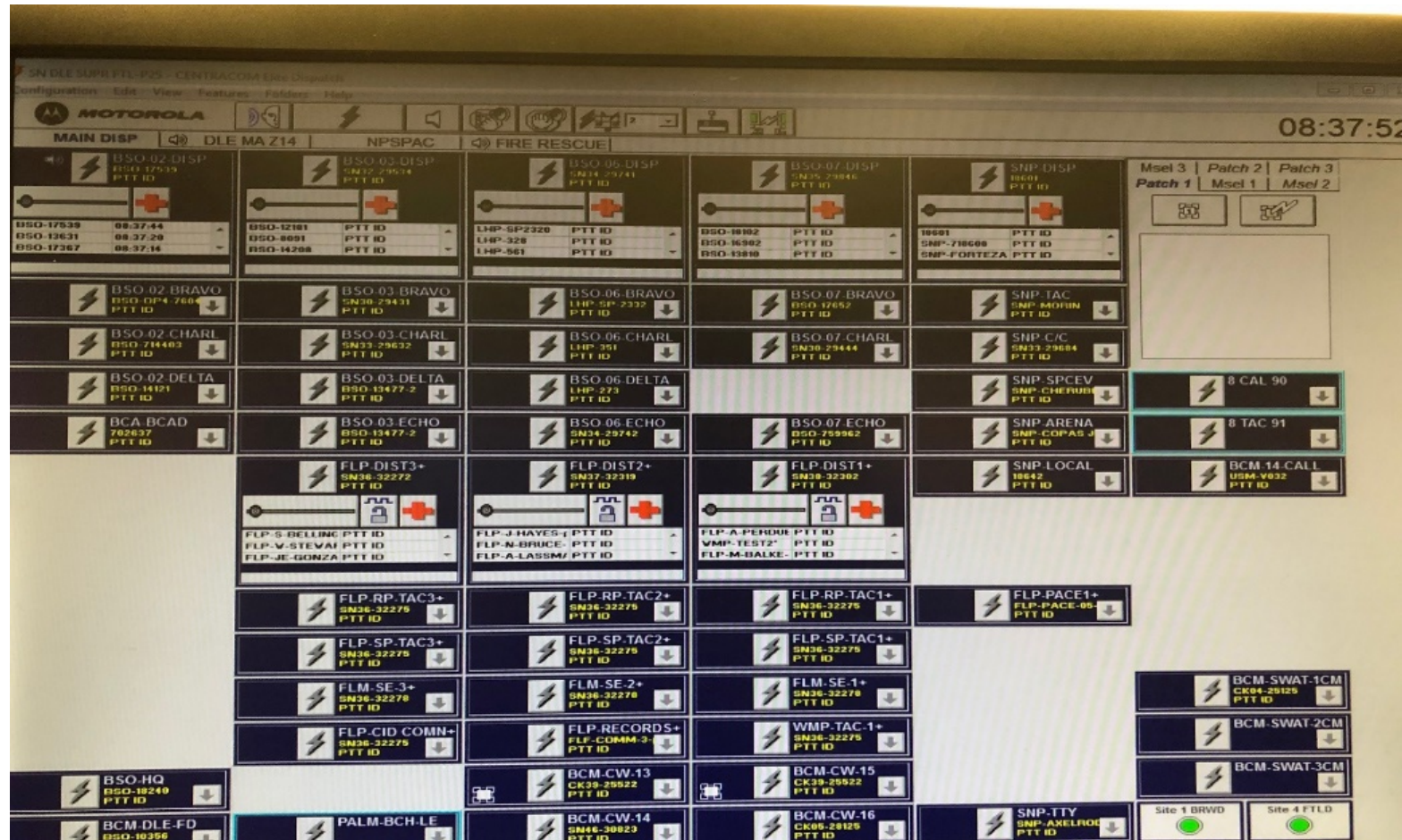
Gold Elite Consoles

- Gold Elite presentation specific to the task assignment to the dispatcher (DLE vs FR)
- **Each PSAP has individual Gold Elite Presentations per PSAP**
- PSAP specific Gold Elite presentations are based upon the jurisdictions assigned to the PSAP (North, Central, South)
- **As such there are multiple Gold Elite presentations found in the Regional System**

Gold Elites supports only 100 resources in presentation

DLE

FR

TAC

Support

Duty Officer
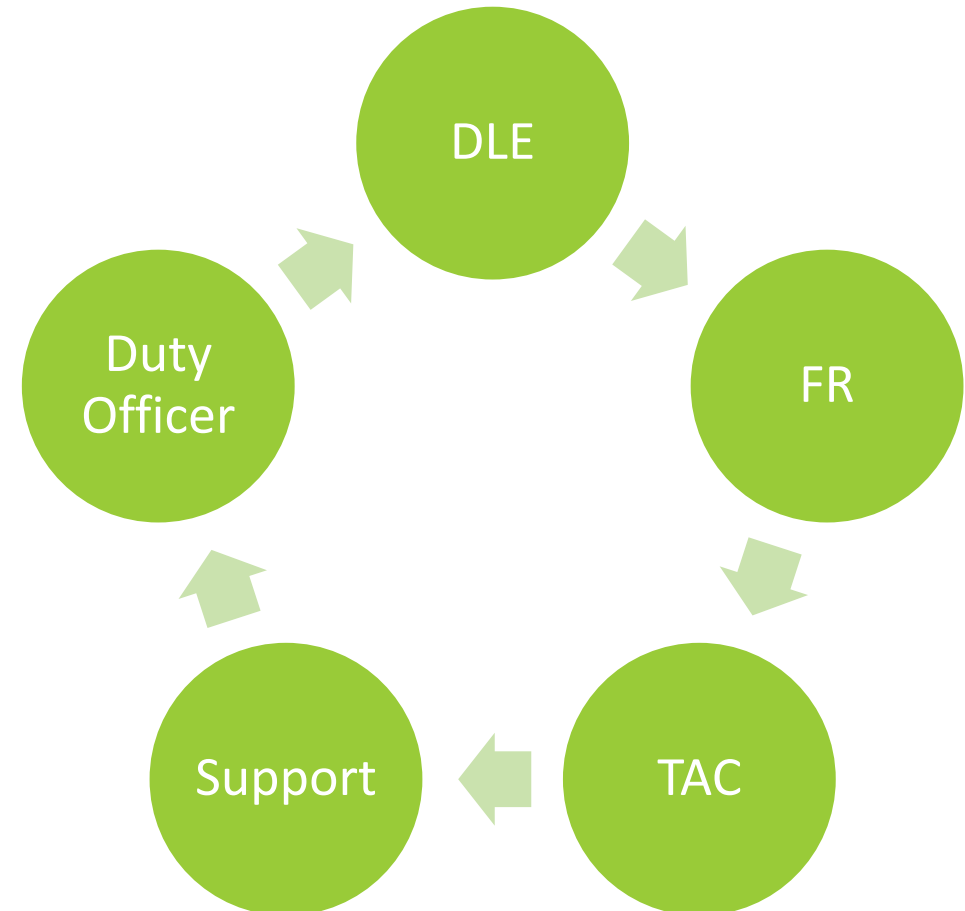
Gold Elite Functionality
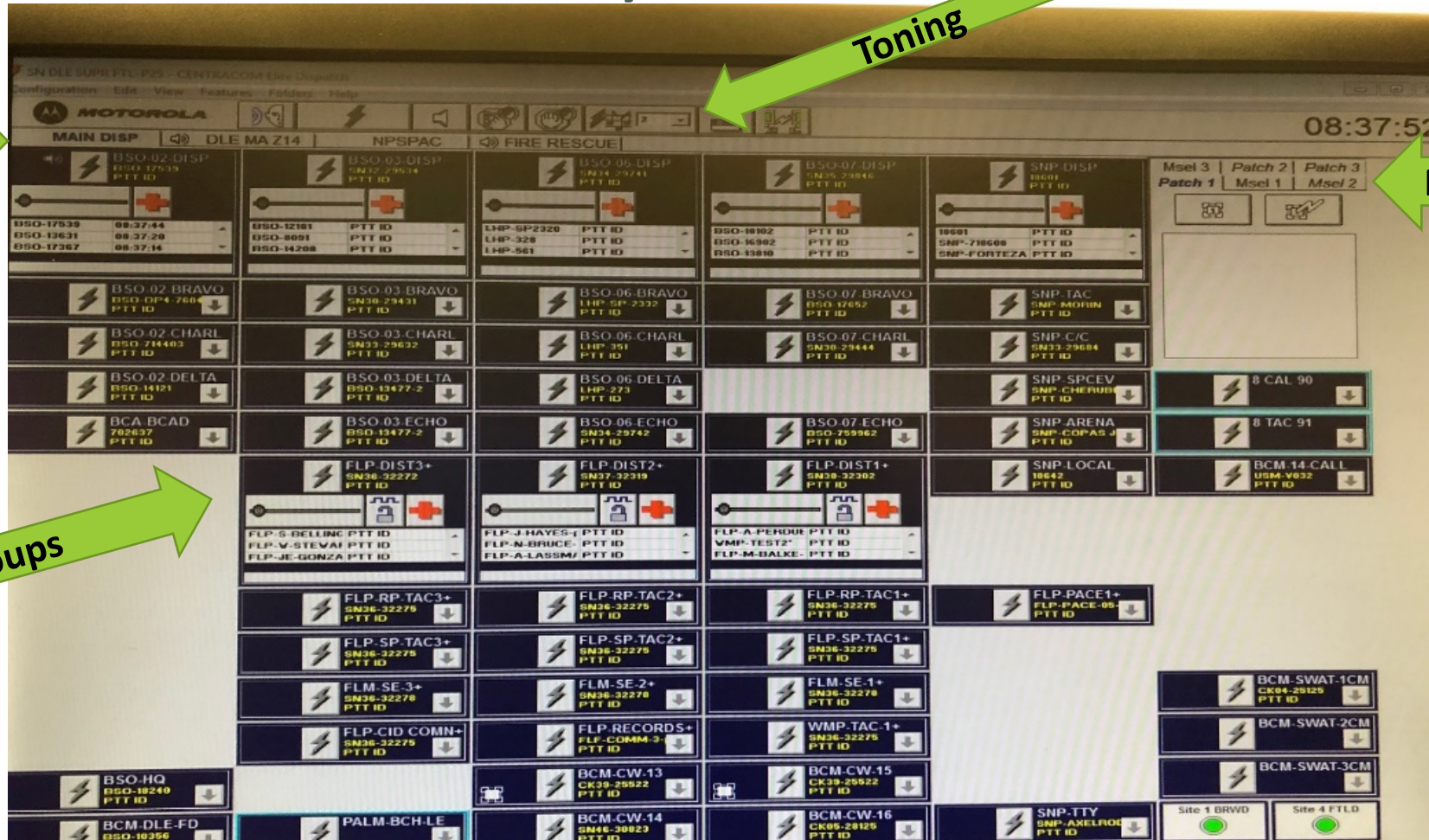
Explaining the Gold Elite

- All "boxes" represent individual talkgroup options available to the dispatcher
- Gold Elites are unique to the PSAP and discipline served
- There are multiple folders pre-designated which groups together common talkgroup themes (ie. City, Mutual Aid, Tactical, etc)
- Tone Alerting is available on all Gold Elites
- Interoperability is achievable for all talkgroups **in presentation**
- Emergency portable radio activations will display as a flashing red box highlighting the talkgroup which executed the emergency

Portable Radio vs Gold Elite

- Portable radios can have over 100 more resources (talkgroups) available than a Gold Elite
- **Dispatchers, therefore, cannot access or monitor those talkgroups that are not in presentation**
- Portable radios are more susceptible to environmental conditions (in-building penetration, weather conditions, and radio health) which can impede the quality of audio heard by the dispatcher
- Audible experiences can differ between field users and dispatchers

Independent Radio Systems

- Independent PSAPs
- Regional Municipalities

Independent PSAPs

Both Coral Springs and Plantation operate an independent radio system

- Implications:
  - Regional Gold Elite have *limited to no presentation* of the talkgroups utilized by Coral Springs or Plantation
  - Interoperability is restricted to either shared county-wide talkgroups or radio patching
  - Fast moving events (critical incidents crossing jurisdictional boundaries) are more difficult due to the unavailability of primary resources found within the Regional System

Regional Municipalities

Both Hollywood and Fort Lauderdale operate independent radio systems

- Implications:
  - Gold Elite presentation and dispatcher access is not impacted
  - There can be auditory differences noted between the two systems at times
  - Failures can occur on the municipal specific system that does not impact the Regional System (or vice versa)
  - As a result, specific disaster contingency plans are executed based upon the nature and source of the impact

Achieving Interoperability, Critical Incidents, and Disaster Contingency Plans

- Patching vs Multi-Selecting
- Shared County-wide Talkgroups
- Tactical Assignments and Critical Incidents
- Disaster Contingency Plans

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Patching

- Patching is executed on the Gold Elite
- Through specific selections, **two or more inter or intra-zone talkgroups can be connected**
- **Selections can be from any resource found on the Gold Elite**
- Patching results in field users immediately connecting with other users who are occupying different talkgroups on possibly different zones
- Patching can connect DLE and FR (provided Gold Elite presentation enables)
- Patching is *seamless* to the field user

Multi-Selecting

- Multi-selecting is executed on the Gold Elite
- Through specific selections, **two or more more inter or intra-zone talkgroups can be connected**
- **Selections can be from any resource <u>found on the Gold Elite</u>**
- Multi-selecting, however, does not allow field users to communicate amongst the selected talkgroups
- Multi-selecting, therefore, is more used for a single point announcement over the talkgroups selected
- Multi-selecting is also *seamless* to the field user, and in fact they are unaware of the connection unless the radio is "keyed" for any reason

Shared County-Wide Mutual Aid Talkgroups

- All Broward County PSAPs (Regional and Independent) have access to shared county-wide mutual aid talkgroups
- Commonly used shared resources are identified as:
  - Calling Channels (DLE and FR)
  - County-wide Mutual Aid Talkgroups
  - County-wide Tactical Talkgroups (FR dominant)
  - State-wide Talkgroups
- BSO Regional (Central) is identified as the County Warning Point, and typically manages control and assignment of these talkgroups to ensure access is available

Patching/Multi-Selecting vs County-Wide Shared

Patching/Multi-Selecting	County-Wide Shared

Patching/Multi-Selecting

- **Pros:**
  - Seamless to field user (achieved via Gold Elite)
  - No field user radio manipulation
  - Easy to execute
- **Cons:**
  - Limitation of talkgroup resources available
  - Limited presentation of Independent PSAP resources
  - Inclusion of too many resources in a patch/multi-select can degrade quality
  - Dependent upon radio system functionality

County-Wide Shared

- **Pros:**
  - All county field uses (DLE and FR) and Regional dispatchers have access to these talkgroups
  - Independent PSAPs and field users have access
- **Cons:**
  - Requires radio manipulation to access
  - Specific talkgroup may not be available for use (pre-assigned) which can delay/complicate finding an accessible talkgroup

Tactical Assignments and Critical Events

Regional policy outlines:

Agency working the critical incident is the "host" agency

o Tactical talkgroups assignments required if:
  o FR – More than 2 units assigned to the event
  o DLE – Incident will require more than 3-5 minutes of impact to normal operations
o Movement to a tactical talkgroup occurs:
  o FR – Once the call is assigned (run card outlines unit requirements and pushes to a tactical assignment)
  o DLE – If normal transmissions cannot be restored, field will move to a tactical based upon if the event is fluid (still moving/pursuit/tracking) or stationary (perimeter/clearing location, etc).

Additional Resources/Mutual Aid on Tactical Events

- The host agency has ownership of the tactical talkgroup assigned to work the event.
- This assignment will be a talkgroup within their zone (easily accessible) that does not require zone maneuvering
- All inbound resources or mutual aid (DLE or FR) will be either:
  - Directed to access the working talkgroup (*provided they have access on their portable radios*)
  - Directed to a secondary/alternate mutual aid talkgroup that is patched into the working talkgroup

Limiting Radio Movement

Host agency field users actively engaged in the working incident are never directed to alter talkgroups away from their primary zone unless absolutely necessary

Why?

OFFICER/PERSONNEL SAFETY

- Movement of field users in the "hot zone" can result in users losing track of their placement on their radios
- In this circumstance, the field user can end on a talkgroup that is either not monitored or not part of the working event
- With hundreds of talkgroups accessible on a field user's portable, the risks are too high that they may end up on a wrong talkgroup assignment

This is a county-wide, shared protocol

Limiting Radio Movement

Standard Practice:

- The host agency will direct to the talkgroup assignment(s) of the critical incident
- Inbound support/mutual aid/resources will be directed to the correct talkgroup and will be required to access that talkgroup as outlined
- Should inbound users not have access to the declared talkgroup, a radio patch will be initiated

High Impact Critical Incidents

- High Impact/Low Frequency Critical Incidents (Active Assailant/Mass Casualty Incidents) also call for additional and focused talkgroup assignments as outlined in Regional Communications Standard Operating Procedures to account for:
  - Traffic
  - Perimeter
  - Staging
  - Triage/Medical
  - SWAT

Disaster Contingency Planning

Complete failure of Broward County Radio System:

- Independent Regional Partners (Hollywood/Fort Lauderdale) assume city-specific talkgroups (off the Broward system's backbone)
- Regional users move to either Independent talkgroup assignments (Hollywood/Fort Lauderdale/Coral Springs) or **State Talkgroups**
- Pre-assigned radio assignments are established based upon geographical location of the city and the coverage area that can support that jurisdiction
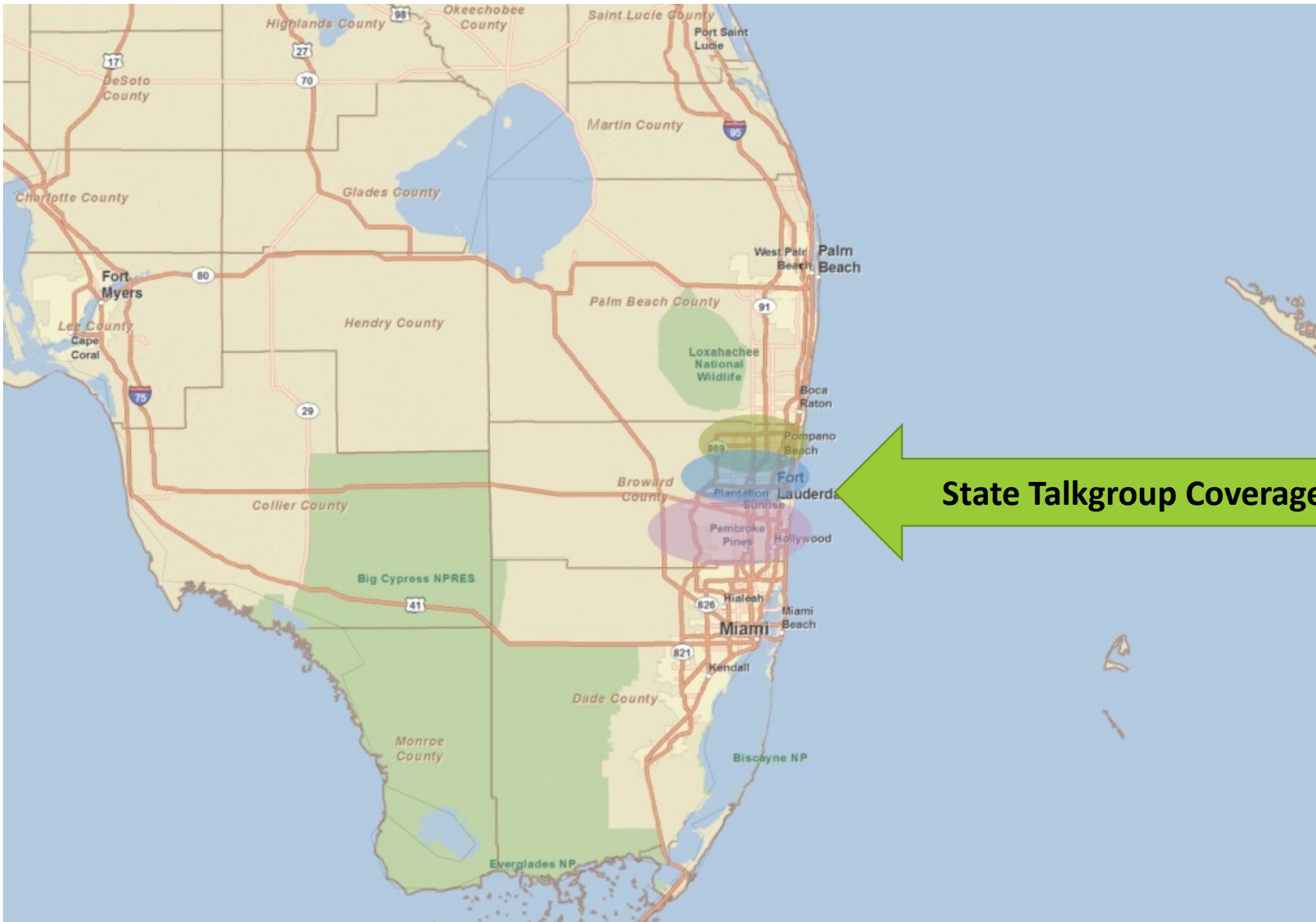
State Talkgroup Coverage Clusters

Disaster Contingency Planning

1. Back-Up Consolettes
   - Each dispatch workstation is outfitted
   - Can access all primary talkgroups and most ancillary/back up talkgroups
   - Reduced capability impacts:
     - No tone alerting/patching/multi-selecting
2. Portable Radios
   - Assignment of a portable radio to the dispatch (same used as field)
   - Reduced capability impacts:
     - Significantly slows work production – accessing radio and CAD
     - No radio features for patching/toning/multi-selecting
     - Limited to programming of the radio itself
3. Telephone Notifications
   - All notifications done via telephone calls to field stations/district offices
   - Recommendations for field staff to report to PSAP to aid in call assignment
   - Reduced capability impacts:
     - Delay in unit assignment
     - Lack of unit awareness and activities

Disaster Contingency – Radio Failures