



Orange County - EMS Radio

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Proposed Coverage



- For land mobile radio
 - » Desired design minimum – Portable held head-high in the street. Industry standard 90 - 95% coverage – 95% of the time
 - » In-building coverage can be enhanced by the use of bi-directional amplifiers
- Paging
 - » Existing system with simulcast

Current Vision – EMS



- Operational
 - » All EMS command on new system
 - Replaces 718
 - » Portable in the street
 - » Controlled access
 - » Inter and intraoperability
 - » Local dispatch capability preserved
 - » VHF high-band paging preserved
 - » Comply with Federal and NYS guidelines – Nation Emergency Communications Plan, NY Statewide Interoperable Communications Plan and HVICC

Current Vision – EMS



- Technical
 - » P-25 Trunked
 - » 700/800 MHz
 - » Simulcast/voting
 - » Redundant interconnects
 - » Hardened sites
 - » Preserve VHF high-band system input to EMS COM1

Subscribers



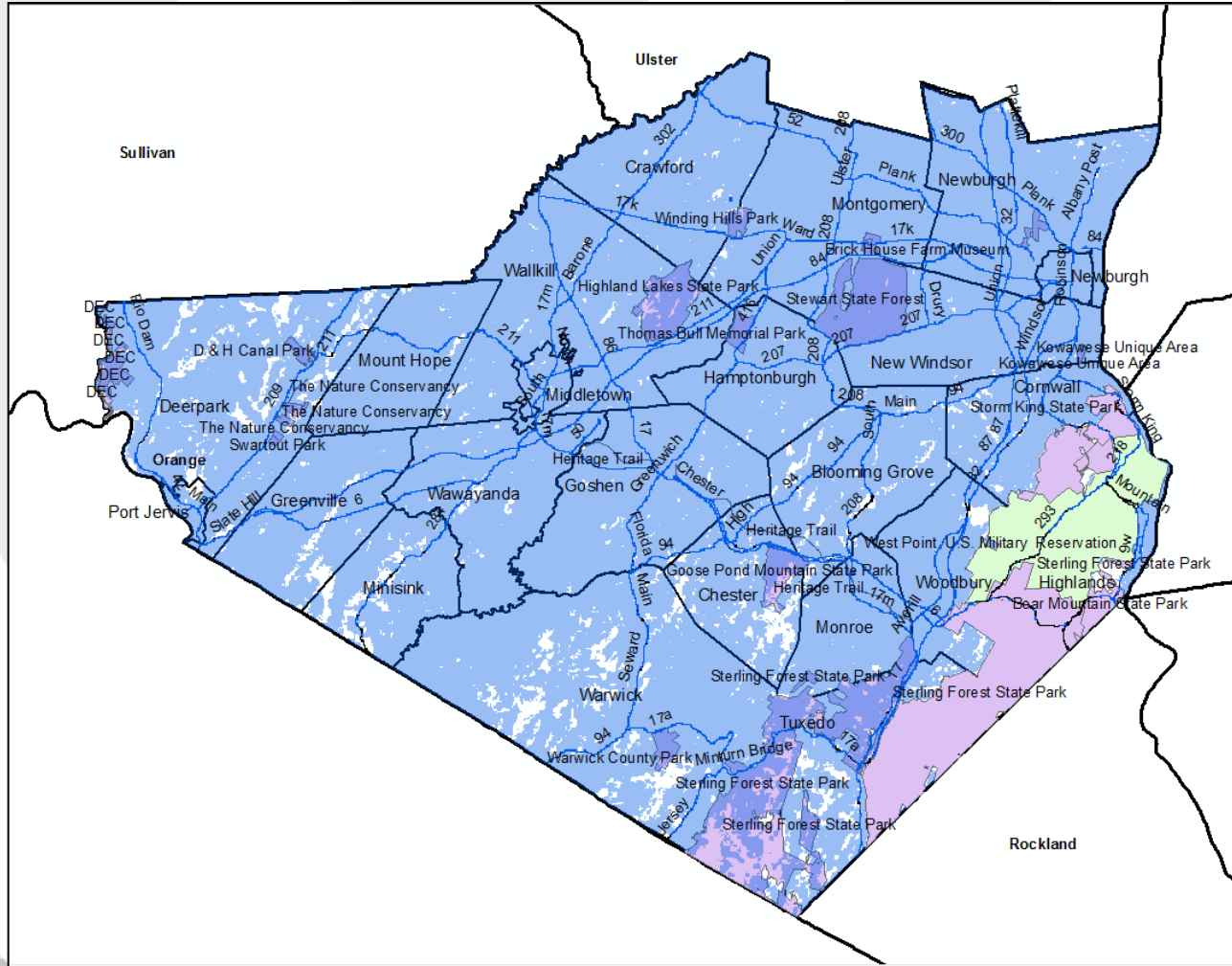
Service	Portable	Mobile	Control Stations
Fire	300	500	51
Law	738	543	32
EMS	1,180	622	NA
DPW	22	97	9
Motor Pool	NA	8	NA
Sub-Totals	2,240	1,770	92
Total Subscribers	4,102		

Coverage

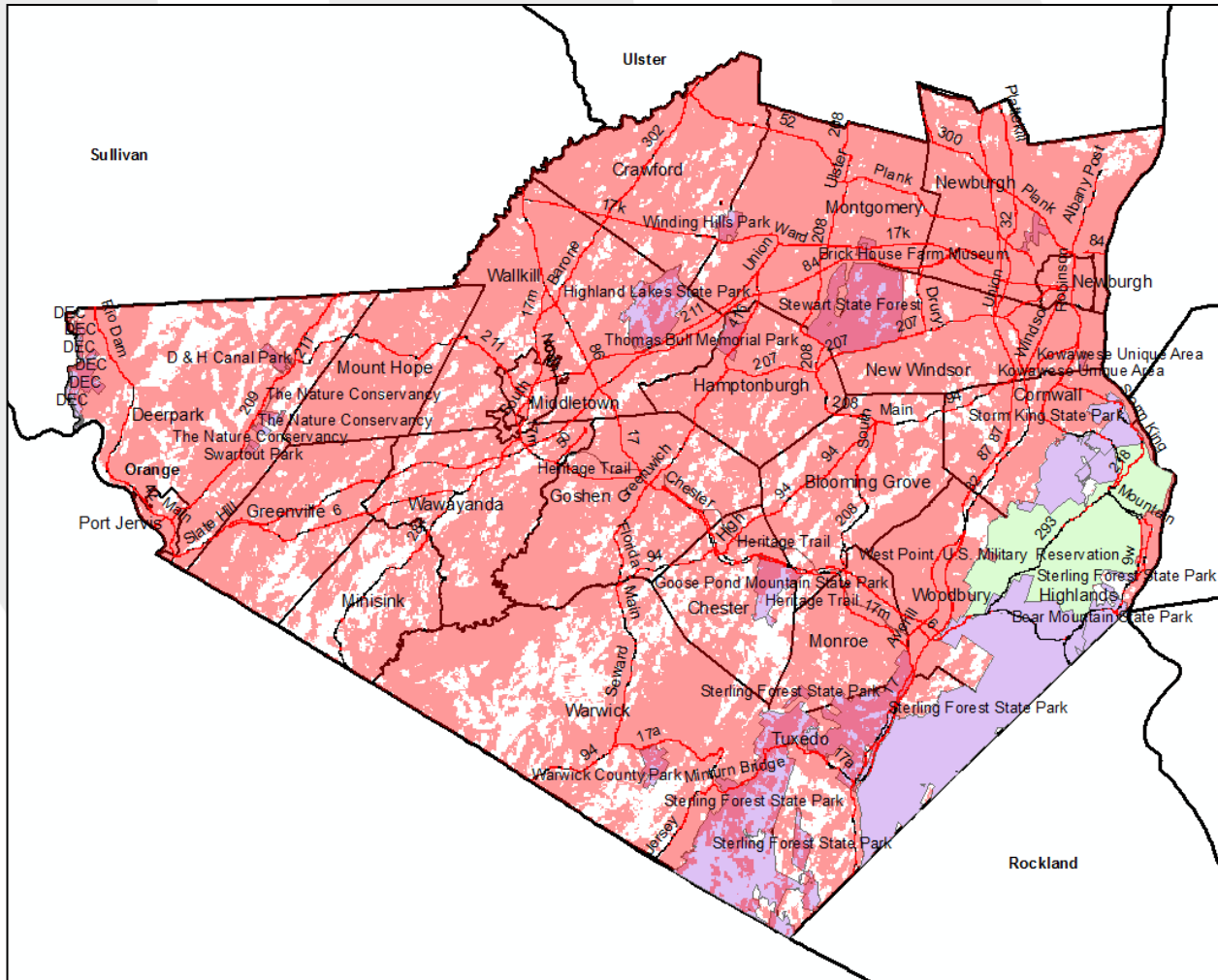


- Developing a preliminary constellation of 14 tower sites:
 - » Arden
 - » Beacon
 - » Graham
 - » Schunnemunk
 - » Goshen
 - » Mt. Peter
 - » Putnam
 - » Wurtsboro
 - » Cronomer Hill
 - » Heater Hill
 - » Sloatsburg
 - » Southfield
 - » Sparrow Bush Estates
 - » Walden Fire Department
- Communications Trailer for on-site support in State Parks and West Point
- Interconnected with microwave

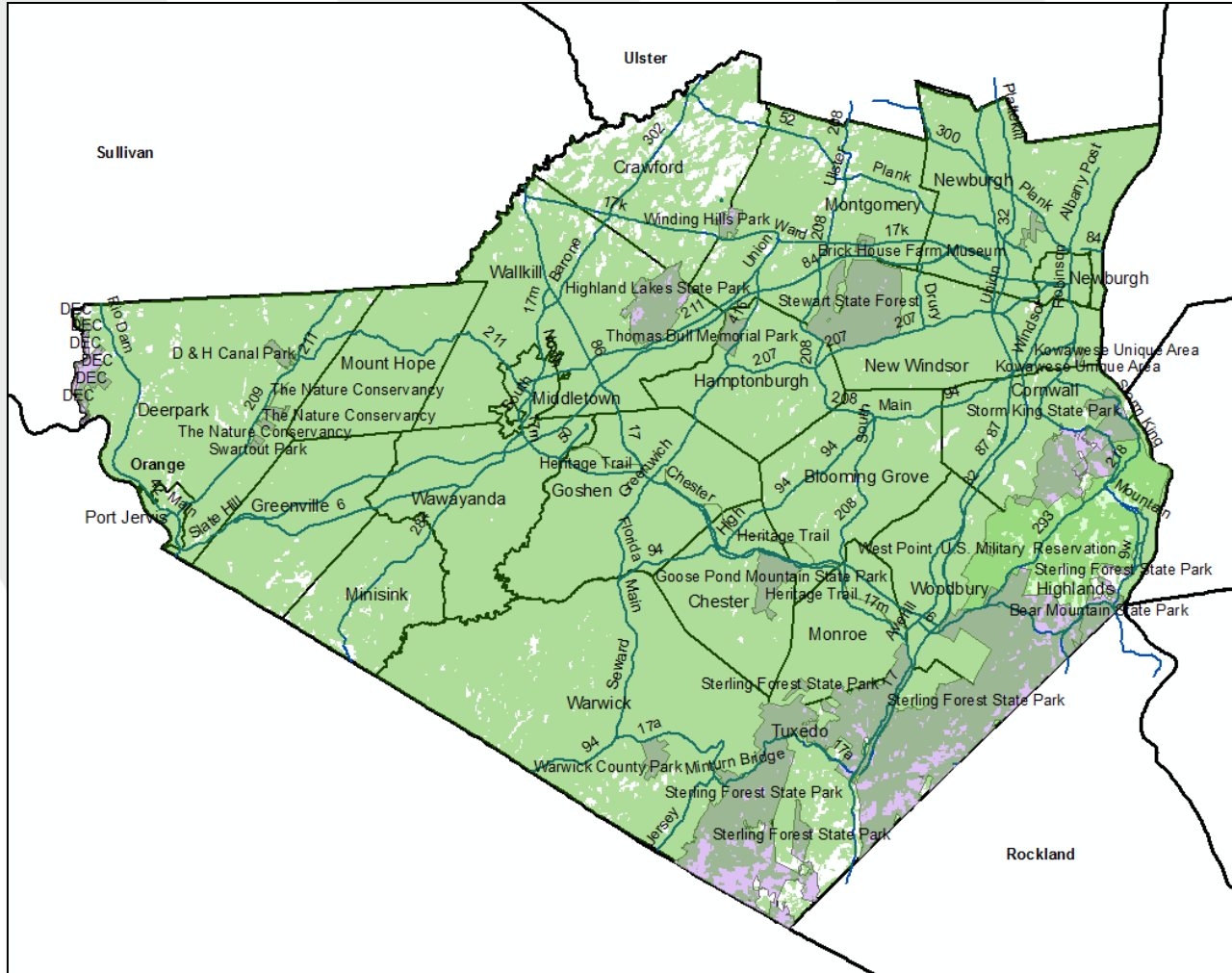
Coverage – Mobile Talk Out



Coverage – Portable Talk In



Coverage – EMS Paging



Conceptual EMS Talk Path Plan



- COM-EMS1 – Similar to existing 718
- COM-EMS2 – Overflow, special ops
- COM-EMS3-8 – Unique COM talk paths for departments that are dispatched locally
- TAC20-29 – Countywide tactical talk groups shared with EMS and EMA for interoperability. On dispatch each event will be assigned a TAC talk path

Conceptual EMS Talk Path Plan



- GRD70-71 – On-scene simplex direct. Shared with law enforcement, fire, and EMA
- GRD72 - On-scene simplex direct. Shared with fire and EMA

Conceptual EMS Talk Path Plan



Radio Position	Function	Name	Groups	Frequency (Transmit)	Frequency (Receive)	Type	Area of Operation	Notes	Questions/Comments
1	Communications	COM-EMS1	EMS	TBD	TBD	Simulcast	Countywide	Dispatch to field	Dispatcher assigns TAC channel upon dispatch.
2	Communications	COM-EMS2	EMS	TBD	TBD	Simulcast	Countywide	Dispatch to field	
3	Communications	COM-EMS3-8	LOCAL EMS	TBD	TBD	Simulcast	Countywide	Lcl dispatch to field	
4	Tactical	TAC20	LE/FIRE/EMS/EMA	TBD	TBD	Simulcast	Countywide	Dispatcher assigned	Unmonitored
5	Tactical	TAC21	LE/FIRE/EMS/EMA	TBD	TBD	Simulcast	Countywide	Dispatcher assigned	
6	Tactical	TAC22	FIRE/EMS/EMA	TBD	TBD	Simulcast	Countywide	Dispatcher assigned	
7	Tactical	TAC23	FIRE/EMS/EMA	TBD	TBD	Simulcast	Countywide	Dispatcher assigned	
8	Tactical	TAC24	FIRE/EMS/EMA	TBD	TBD	Simulcast	Countywide	Dispatcher assigned	
9	Tactical	TAC25	FIRE/EMS/EMA	TBD	TBD	Simulcast	Countywide	Dispatcher assigned	
10	Tactical	TAC26	FIRE/EMS/EMA	TBD	TBD	Simulcast	Countywide	Dispatcher assigned	
11	Tactical	TAC27	FIRE/EMS/EMA	TBD	TBD	Simulcast	Countywide	Dispatcher assigned	
12	Tactical	TAC28	FIRE/EMS/EMA	TBD	TBD	Simulcast	Countywide	Dispatcher assigned	
13	Tactical	TAC29	FIRE/EMS/EMA	TBD	TBD	Simulcast	Countywide	Dispatcher assigned	
14	Ground	GRD70	LE/FIRE/EMS/EMA	TBD	TBD	Simplex	On-scene		
15	Ground	GRD71	LE/FIRE/EMS/EMA	TBD	TBD	Simplex	On-scene		
16	Ground	GRD72	FIRE/EMS/EMA	TBD	TBD	Simplex	On-scene		

Conceptual EMS 800 MHz Interop Talk Path Plan



- COM EMS1-8 – Repeat of main page
- Radio Positions 4-13 – 800 MHz National Interoperability channels
- Radio Position 14 – Spare
- Paging – Retransmission of paging talk path
- COM-EMS1 – Similar to existing 718 –Duplicate of radio position 1

Conceptual EMS 800 MHz Interop Talk Path Plan



Radio Position	Function	Name	Groups	Frequency (Transmit)	Frequency (Receive)	Type	Area of Operation	Notes	Questions/Comments
1	Communications	COM-EMS1	EMS	TBD	TBD	Simulcast	Countywide	Dispatch to field	
2	Communications	COM-EMS2	EMS	TBD	TBD	Simulcast	Countywide	Dispatch to field	
3	Communications	COM-EMS3-8	LOCAL EMS	TBD	TBD	Simulcast	Countywide	Lcl dispatch to field	
4	8CALL90	8CALL90	LE/FIRE/EMS/DPW/EMA	851.0125	806.0125	Repeater	Single Site		Analog
5	8CALL90D	8CALL90D	LE/FIRE/EMS/DPW/EMA	851.0125	851.0125	Simplex	Single Site		Analog
6	8TAC91	8TAC91	LE/FIRE/EMS/DPW/EMA	851.5125	806.0125	Repeater	On-scene	Dispatcher assigned	Analog
7	8TAC91D	8TAC91D	LE/FIRE/EMS/DPW/EMA	851.5125	851.5125	Simplex	On-scene	Dispatcher assigned	Analog
8	8TAC92	8TAC92	LE/FIRE/EMS/DPW/EMA	852.0125	807.0125	Repeater	On-scene	Dispatcher assigned	Analog
9	8TAC92D	8TAC92D	LE/FIRE/EMS/DPW/EMA	852.0125	852.0125	Simplex	On-scene	Dispatcher assigned	Analog
10	8TAC93	8TAC93	LE/FIRE/EMS/DPW/EMA	852.5125	807.0125	Repeater	On-scene	Dispatcher assigned	Analog
11	8TAC93D	8TAC93D	LE/FIRE/EMS/DPW/EMA	852.5125	852.5125	Simplex	On-scene	Dispatcher assigned	Analog
12	8TAC94	8TAC94	LE/FIRE/EMS/DPW/EMA	853.0125	808.0125	Repeater	On-scene	Dispatcher assigned	Analog
13	8TAC94D	8TAC94D	LE/FIRE/EMS/DPW/EMA	853.0125	853.0125	Simplex	On-scene	Dispatcher assigned	Analog
14	Spare								
15	Paging	PAG	EMS PAGE	TBD	TBD	Simulcast	Countywide	Broadcast of paging	
16	Communications	COM-EMS1	EMS	TBD	TBD	Simulcast	Countywide	Dispatch to field	

Conceptual Interop – 700 MHz Talk Path Plan



- There are 2 calling and 30 other talk paths designated for: general, EMS, fire, law, mobile data, mobile repeater, and other public service
- Need to coordinate with State and Consortium
- COM EMS1-3 – Repeat of main page
- Radio Positions 4 thru 13 – 700 MHz National Interoperability channels
- Radio Positions 14 and 15 – Spare

Conceptual Interop – 700 MHz Talk Path Plan



Radio Position	Function	Name	Groups	Frequency (Transmit)	Frequency (Receive)	Type	Area of Operation	Notes	Questions/Comments
1	Communications	COM-EMS1	EMS	TBD	TBD	Simulcast	Countywide	Dispatch to field	
2	Communications	COM-EMS2	EMS	TBD	TBD	Simulcast	Countywide	Dispatch to field	
3	Communications	COM-EMS3-8	EMS	TBD	TBD	Simulcast	Countywide	Lcl dispatch to field	
4	7TBD	TBD	LE/FIRE/EMS/DPW/EMA	TBD	TBD	Repeater	Single Site		Digital
5	7TBD	TBD	LE/FIRE/EMS/DPW/EMA	TBD	TBD	Simplex	On-scene		Digital
6	7TBD	TBD	LE/FIRE/EMS/DPW/EMA	TBD	TBD	Repeater	Single Site	Dispatcher assigned	Digital
7	7TBD	TBD	LE/FIRE/EMS/DPW/EMA	TBD	TBD	Simplex	On-scene	Dispatcher assigned	Digital
8	7TBD	TBD	LE/FIRE/EMS/DPW/EMA	TBD	TBD	Repeater	Single Site	Dispatcher assigned	Digital
9	7TBD	TBD	LE/FIRE/EMS/DPW/EMA	TBD	TBD	Simplex	On-scene	Dispatcher assigned	Digital
10	7TBD	TBD	LE/FIRE/EMS/DPW/EMA	TBD	TBD	Repeater	Single Site	Dispatcher assigned	Digital
11	7TBD	TBD	LE/FIRE/EMS/DPW/EMA	TBD	TBD	Simplex	On-scene	Dispatcher assigned	Digital
12	7TBD	TBD	LE/FIRE/EMS/DPW/EMA	TBD	TBD	Repeater	Single Site	Dispatcher assigned	Digital
13	7TBD	TBD	LE/FIRE/EMS/DPW/EMA	TBD	TBD	Simplex	On-scene	Dispatcher assigned	Digital
14	Spare								
15	Spare								
16	Communications	COM-EMS1	EMS	TBD	TBD	Simulcast	Countywide	Dispatch to field	

Conceptual Hospital Talk Path Plan



- COM EMS1-8 – Repeat of main page
- Radio Positions 4 – 10 – Direct dedicated talk paths with designated hospital. Replaces VHF high-band H.E.A.R
- Radio Positions 11 – 16 - Spares

Conceptual Hospital Talk Path Plan



Radio Position	Function	Name	Groups	Frequency (Transmit)	Frequency (Receive)	Type	Area of Operation	Notes
1	Communications	COM-EMS1	EMS	TBD	TBD	Simulcast	Countywide	Dispatch to field
2	Communications	COM-EMS2	EMS	TBD	TBD	Simulcast	Countywide	Dispatch to field
3	Communications	COM-EMS3-8	LOCAL EMS	TBD	TBD	Simulcast	Countywide	Lcl dispatch to field
4	Hospital	TAC-EMSA	EMS	TBD	TBD	Simulcast	Countywide	Orange Regional
5	Hospital	TAC-EMSB	EMS	TBD	TBD	Simulcast	Countywide	St. Anthony's
6	Hospital	TAC-EMSC	EMS	TBD	TBD	Simulcast	Countywide	St. Luke's - Cornwell
7	Hospital	TAC-EMSD	EMS	TBD	TBD	Simulcast	Countywide	St. Luke's - Newburgh
8	Hospital	TAC-EMSE	EMS	TBD	TBD	Simulcast	Countywide	Bon Secours
9	Hospital	TAC-EMSF	EMS	TBD	TBD	Simulcast	Countywide	Good Samaritan
10	Hospital	TAC-EMSG	EMS	TBD	TBD	Simulcast	Countywide	Saint Francis
11	Spare							
12	Spare							
13	Spare							
14	Spare							
15	Spare							
16	Spare							

Discussion



- Coverage
- Talk path plans
 - » Dispatcher assigning TAC
 - » Monitoring TAC
- Interoperability
 - » 800 MHz
 - » 700 MHz
 - » Other