



Public Safety Radio System Update

September 9, 2013

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Timeline

- Beginning in 2016, Motorola will no longer support the current system. Also, future upgrades are not available. Therefore, a system replacement is required
- In 2008, IS department completed a comprehensive 800 MHz Radio Master Plan which identified the need to begin planning for a system replacement
- In 2011, the County engaged RCC, Consultants, Inc. to assist in evaluating our options for replacement, received report early 2012
- Steering committee convened in May of 2012 to vet consultants report
- Presented update at March 11, 2013 Board work session

Since We Last Saw You

- County's CIP funding model updated to move funding forward to FY15 to accommodate the City of Raleigh (CoR) emergency communications center
- Steering committee sub team met several times with Cary and NCSHP to refine costs and partnership parameters
- Revised both Cary and NCSHP project/funding model to accommodate the CoR facility
 - Both options fund replacement of current consoles only
 - Any additional consoles required for new CoR facility to be funded by CoR
- Eliminated Wake-only option

Expenditures

Capital

- Technical infrastructure at tower sites
 - 10 Tower sites
 - 24 channels each site
- Radio dispatch console equipment (911 Center, Barwell backup 911 center, Sheriff's Office, etc.)
- Microwave equipment for use in connecting the tower sites
- Engineering, project management, implementation services
- Backup system controller hardware and software (NCSHP only)

Annual Maintenance/Technology Refresh

- Support/Maintenance
 - Software: bug fixes, enhancements, upgrades
 - Hardware: break/fix support
- Migration Assurance – technology refresh bundled in predictable, level operating cost

Cost Overview

Description	NCSHP Partnership	Cary Partnership
Estimated Capital Project Costs	\$31,048,316	\$29,669,988
Total Estimated Annual Maintenance	\$1,474,847	\$1,423,735
Estimated Annual Maintenance – County Portion Only	\$633,313	\$611,365
Total Estimated Annual Maintenance (15 YR)	\$23,740,458	\$22,917,714
Total Estimated Annual Maintenance (15 YR) County Portion Only	\$10,194,373	\$9,841,079
Total Estimated Platform Cost (15 YR)	\$54,788,775	\$52,587,701

Partnership Overview

Description	NCSHP Partnership	Cary Partnership
Project Timeline	29 Months	32 Months
	Est. Completion Dec 2016	Est. Completion Feb 2017
Impact to First Responders/Interoperability	Minimal	Minimal
Coverage	Addresses coverage issue areas	Addresses coverage issue areas
Costs	+2.2 million (over lowest cost option)	Least costly
Annual Maintenance/Technology Refresh – shared equipment	Not clearly defined	Planned via Motorola Migration Assurance
Disaster Recovery Capability	Not clearly defined	Fully Automated
Partner-Agency Radio Traffic Load on Wake County System	Average +30%; Greater spikes during major events	0% (Networks are not shared)
System Management Autonomy	Limited	Flexible
System ID Resources	17,000 Max. Available	64,000 Max. Available
System Type	Motorola	Motorola

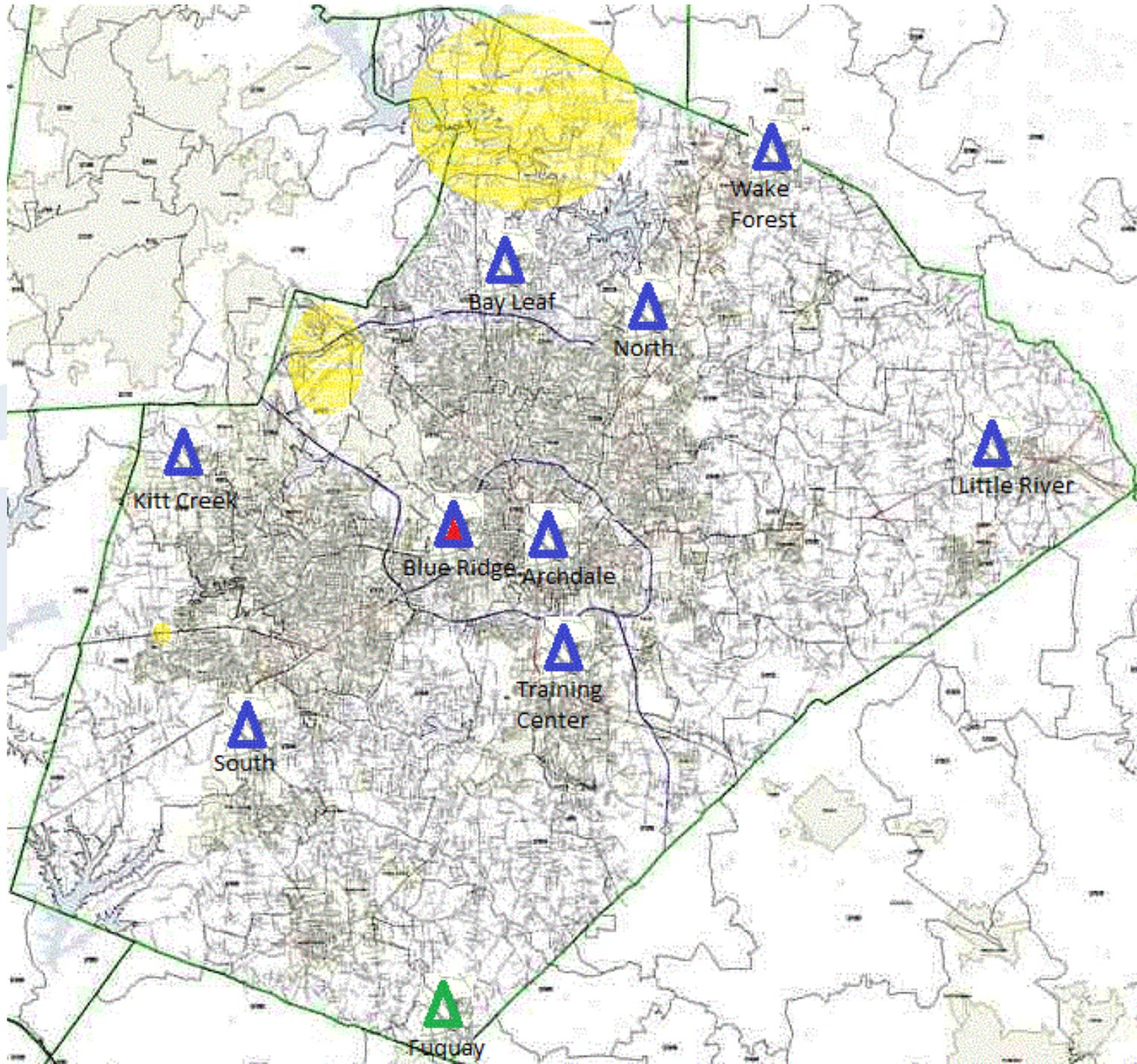
Recommendation

- Based on evaluation criteria below, majority consensus from Steering Committee to proceed with the Cary partnership option
 - *User Functionality*
 - *How reliable and easy to use will the system be for public safety field personnel?*
 - *How easily will personnel be able to communicate with other agencies and jurisdictions?*
 - *Which option is the best value in terms of capacity?*
 - *System Management*
 - *How easy will the system be to manage and upgrade?*
 - *How easily/quickly can changes be implemented to respond to significant events within the County?*
 - *Costs*
 - *What components are required and when will costs be incurred?*

Current Wake County System

Legend:

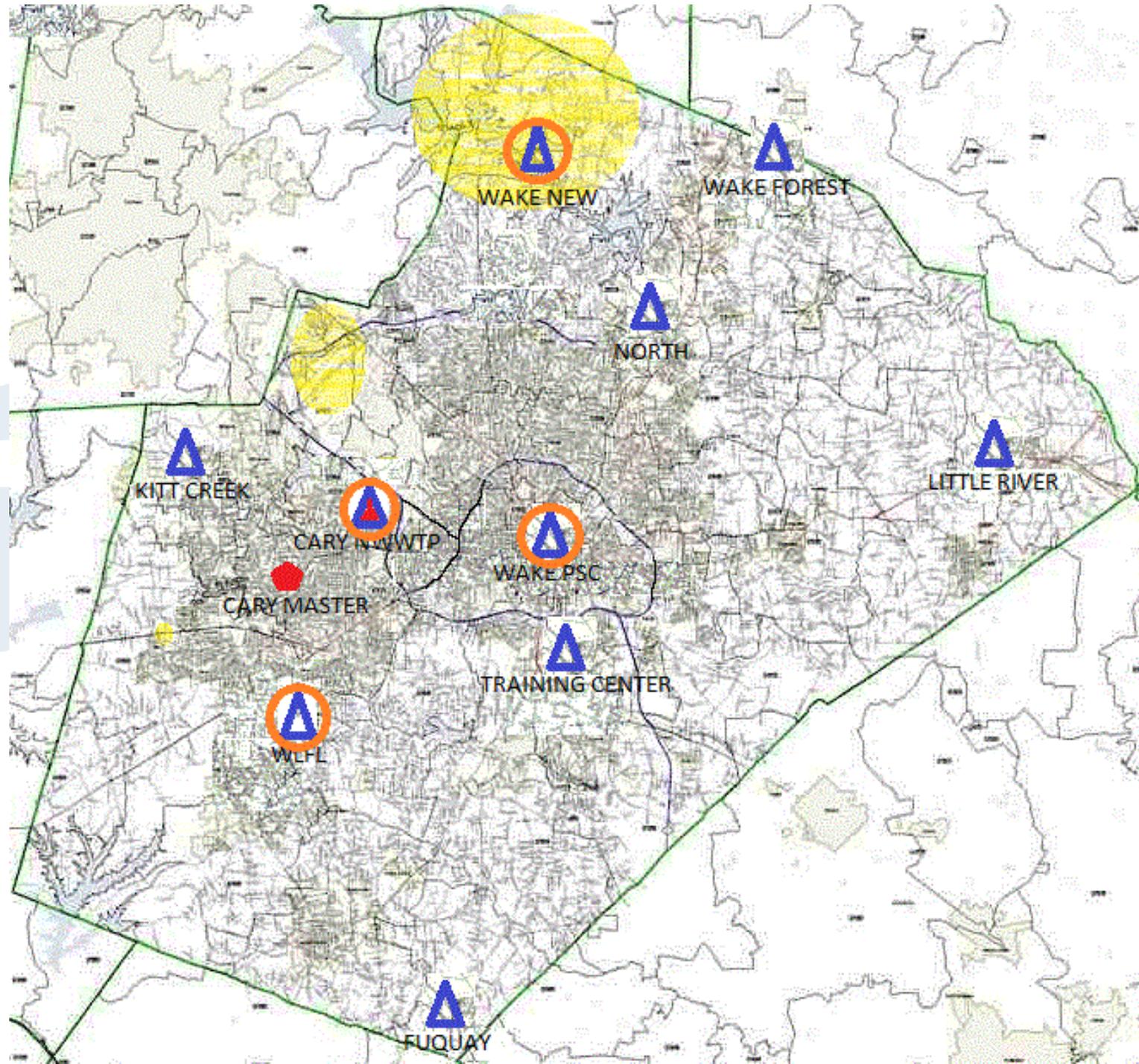
- Blue = 24 channels
- Green = 10 channels
- Red = Master site
- Yellow = Areas targeted for radio signal improvement



Proposed Wake/Cary Partnership

Legend:

- Blue = 24 channels
- Red = Master/backup site
- Orange = New or relocated sites
- Yellow = Areas targeted for radio signal improvement



Impact to Current Partnership w/ NCSHP

- Impact to NCSHP

- NCSHP and partners traffic moves off of the County's tower infrastructure
- Traffic moves to the NCSHP P25 system covering Wake County (scheduled to be operational 2nd quarter 2014)
- We estimate that this move will require the NCSHP increase channel capacity on their system by 4 – 5 channels (at a cost of approximately 2 million)

- Impact to Wake County

- Requires us to provide a list of named users (radios) who will need access to NCSHP system for connectivity outside of County system
- Wake converts to model similar to the other large municipalities who operate their own system (e.g. Charlotte Mecklenburg, New Hanover County, Durham County, Guilford Metro)

Next Steps

- Follow-up on any questions raised
- Proceed with drafting Inter-Local Agreements
 - Cary: ILA will detail governance, funding structure, upgrade process, etc.
 - NCSHP: Amend ILA to ensure smooth exit for both partners from current partnership
- Plan to return at the upcoming November 4th or 18th BoC meeting to request authorization for County Manager to execute ILAs
- Recommend funding be appropriated in the FY15 CIP budget for the project
- System acquisition begins July 2014