Cumberland County Commissioners' Finance Meeting

Agenda

Wednesday, April 13, 2016 - 1:30 PM
Commissioners Hearing Room
Courthouse, Carlisle PA

Present: Commissioners Vince DiFilippo, Jim Hertzler and Gary Eichelberger; Larry Thomas, Chief Clerk; Brian Hamilton, Public Safety; Dana Best, Finance

Press: Jake Austin, The Sentinel

Call to Order: Commissioner DiFilippo called the meeting to order.

Public Comment: None

Chief Clerk Thomas welcomed everyone to the Finance meeting. He discussed the considerable expense the County will encounter down the pike to upgrade the present public radio system. The objective of this meeting is to provide the Commissioners with sufficient advance notice of the expense; what the options are and the necessity of taking action.

The Topic for discussion:
Public Safety Radio Project – Brian Hamilton (see attached presentation)

Commissioner DiFilippo questioned the reason behind the need for replacement of the two towers that are currently in the 2016 budget. Brian replied that there are standards the towers must meet and due to age and condition these towers no longer meet those standards. The towers are not about to fall down but gave an example that if more equipment was needed those towers would not be able to handle the additions. Commissioner Hertzler questioned the need for replacement of the microwave system. The current system has been in place more than fifteen (15) years and will not work with the new radio system since there is not enough bandwidth to carry all the voice and data information required with the new system. Brian stressed that as of today there are no alarms, capacity has not been compromised and no end of support for the operating system so the change does not need to be made right away.

Regarding the evolution factor, Commissioner Hertzler questioned the meaning of "could jeopardize regional funding opportunities." Brian said it would depend on the particular grants as some specify they will only fund Project 25 compliant equipment. Commissioner Hertzler compared the Project 25 system to the previous 800 megahertz system which cost hundreds of millions of dollars and wants to make sure the cost of Project 25 system is kept in mind. Bob Shively contributed that there have been many advantages to the 800 megahertz system and Commissioner Hertzler replied there have been many complaints, namely the PA State Police.

Chief Clerk Thomas questioned the meaning of agnostic as used in the presentation. Brian explained it means "like" radio systems to ensure communications between borders. They have this ability now but the future system will make it more seamless. Commissioner Eichelberger questioned if "patches" will still be needed and Brian said that they will, however, the new system will be able to go a step above.

Commissioner Hertzler questioned how the Project 25 system fit in with the rest of the state and how can we make sure this doesn't duplicate anything the state is doing already. Brian answered that the Project 25 system lends us the ability to coordinate with other counties

Dana Best presented the financial aspect of the project. She stressed that the example given of a funding option was only one example. She believes the final will be very different.

Commissioner Eichelberger questioned who would be the Project Manager for the Project 25 system. It was stated it would be Brian Hamilton. Chief Clerk Thomas said the overall management may come out of the Commissioners' office with input by finance and 911.

Questions: Commissioner Hertzler noted a large part of Pennsylvania counties do not appear to be moving forward in the conversion to the Project 25 system. Brian thought one reason may be a cost issue with not enough revenue. Commissioner Eichelberger mentioned the possibility of newer systems in the other counties as a reason. Brian concurred it was a good possibility that they may have equipment that is sufficient to carry them into the future without moving to the Project 25 system.

Other Business: Commissioner Hertzler said that while the Commissioners had agreed to draft a letter of support to our legislators regarding House Bill 794, the bill passed both the Pennsylvania House and Senate and is on the Governor's desk for his signature within the next 10 days. Commissioner Hertzler would like to send a letter to the Governor in support of his approval. Commissioners DiFilippo and Eichelberger agreed.

Adjourn: There being no further business to come before the Board, Commissioner Hertzler moved to adjourn the meeting.

Respectfully Submitted,

Linda Koser
Administrative Technician

Future Radio System

Finance Meeting

Wednesday, April 13th, 2016

Future Radio System

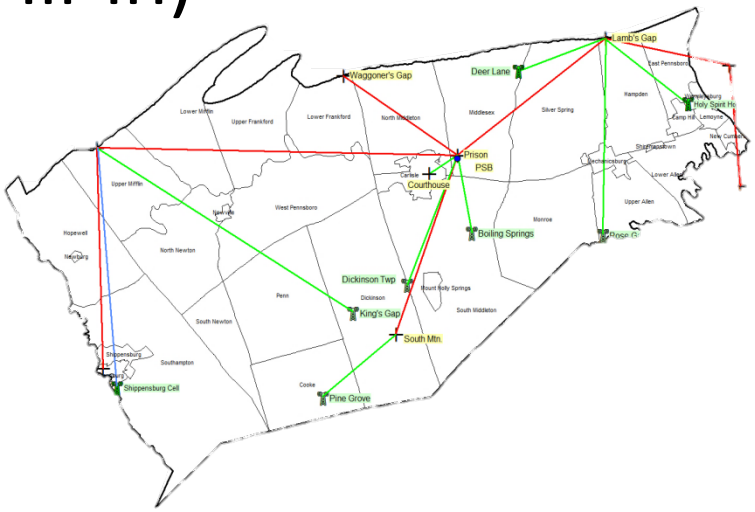
- Part 1: Radio 101
  - Components
  - Value/Purpose
  - History
- Part 2: Planning Ahead
- Part 3: Financial Options
- Part 4: Outreach with Stakeholders
- Part 5: Key Decision Points

Part 1: Radio 101

- Components:
  - Site layout
  - Radio Sites
  - Microwave system
  - Dispatch console
  - End user radio

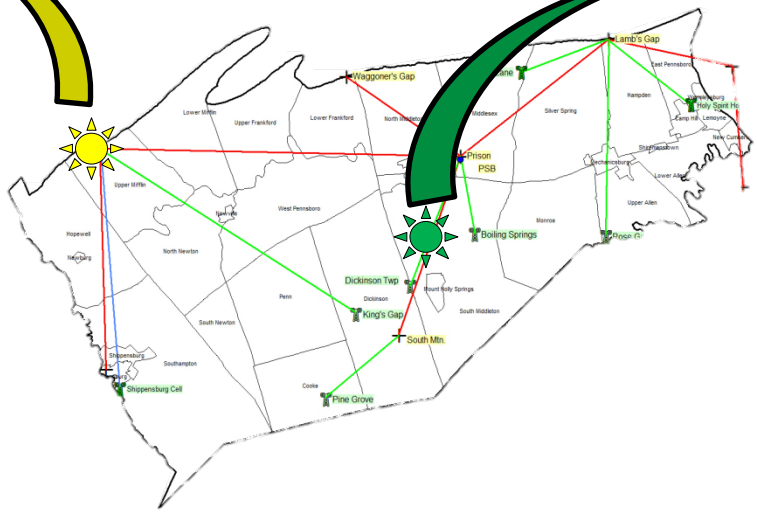
Components: Radio Sites

- 10 Self supporting towers (High Profile)
  - 6 owned by County
    - 2 need replaced currently in 2016 budget for planning
  - 2 pay rent
  - 2 co-locate with State agencies
- 2 Telephone pole sites (Fill-in)
- 2 Sled mount sites
- 2 Water tank sites
- 1 Football Stadium site
- 1 Smoke Stack site



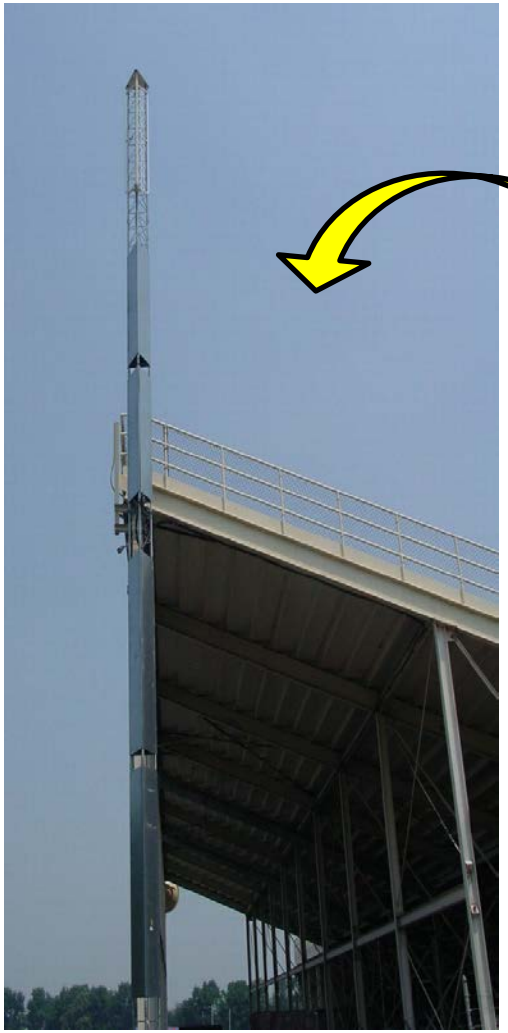
High Profile vs Fill-in Radio Sites

Three Square Hollow

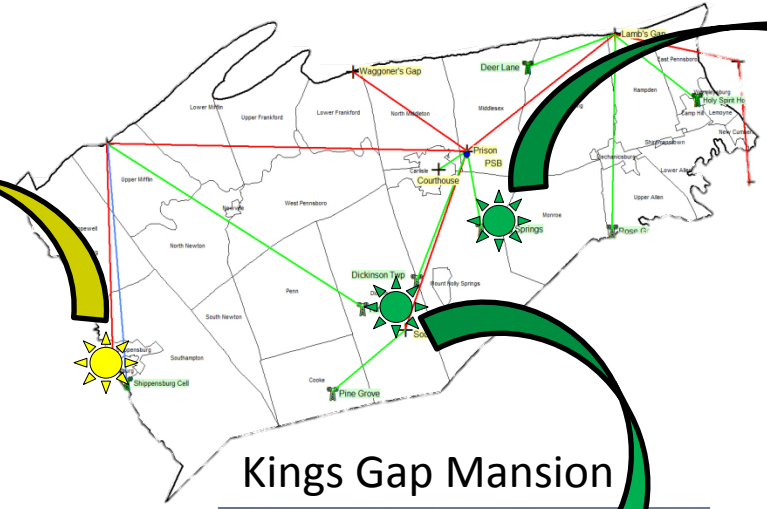


Dickinson Township

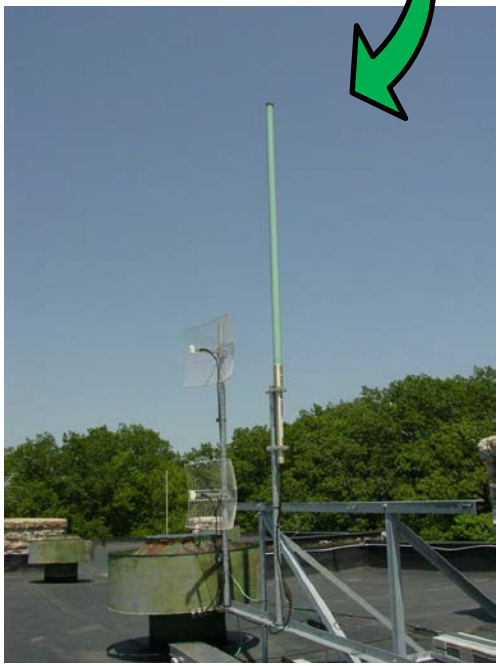
High Profile vs Fill-in Radio Sites



Shippensburg University

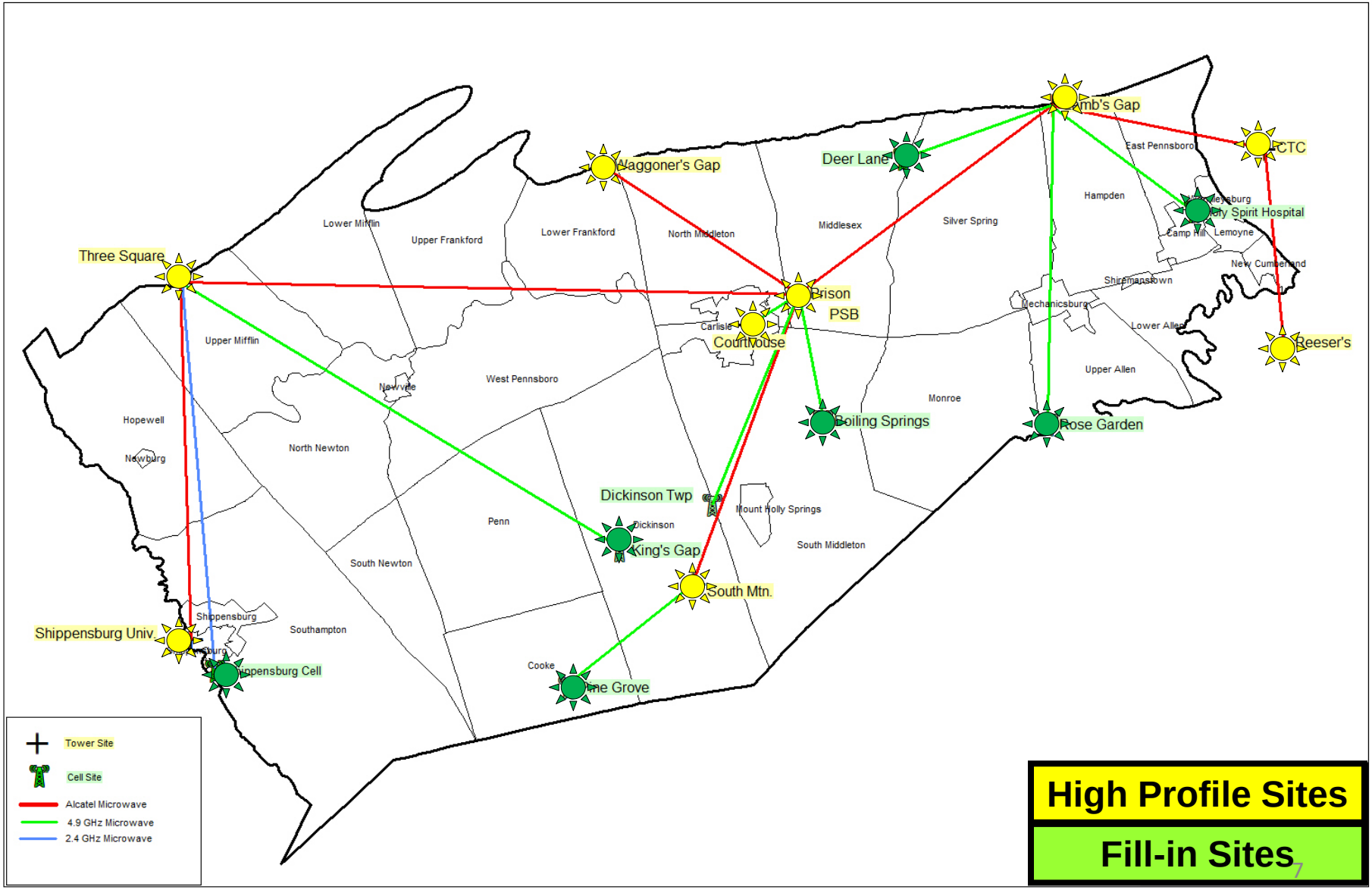


Kings Gap Mansion



Boiling Springs

Components: Site Layout



Components: Site Layout

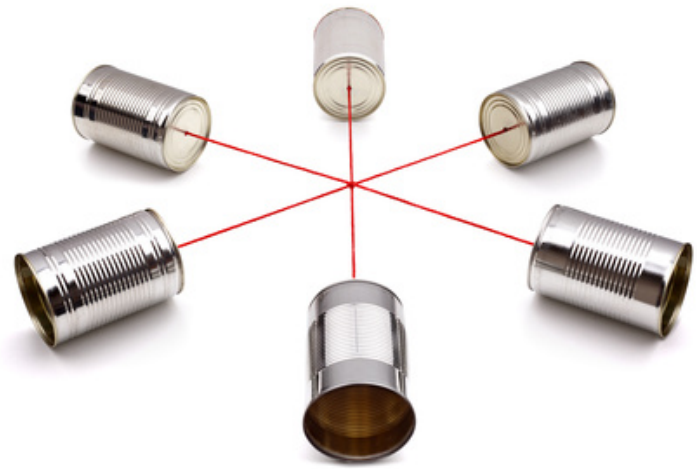
- Shelters
  - 11 sites have shelters to house equipment
  - Others are outside weatherproof mounts or housed within a building
- Power
  - 6 sites have generators for backup power
  - 4 sites have backup power provided by site owner
  - Other sites use battery as a short term backup power source

Three Square Hollow Shelter

This will be the standard for the future radio system

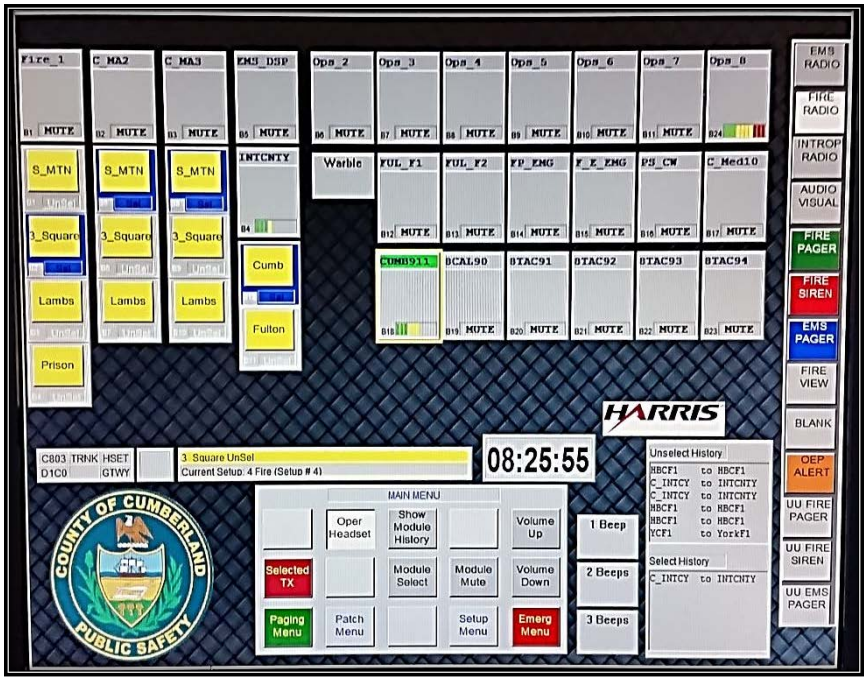
Components: Microwave

- Wireless system that connects all sites together and creates the radio network
- Will need replaced as part of the new radio project



Components: Dispatch Consoles

- What the 911 dispatchers use to communicate with emergency responders
- Proposed to upgrade computers in 2017
- Will need to upgrade dispatch software and computers at time of new radio system implementation



Components: End User Radios

- Mobile radios (fixed in a vehicle)
- Portable radios (handheld)
- Original model of mobile radio will need replaced to work on new radio system
- Users can look at Regional Financing options to help acquire new radios
    - Ex. Franklin County Fire Chiefs – recipient of a grant on behalf of all departments in the county to buy radios = approx. $1.2M

Value/Purpose

- Required to answer emergency calls and dispatch emergency responders (4PA Code Chapter 120b Public Safety Emergency Telephone Act)
- Technology changes will force Public Safety Answering Point (PSAP) to perform some level of system refresh between 10 and 15 years
- By using our County-owned network, we are able to maintain high level of system availability and greatly minimize failures for mission critical communications
- As opposed to using commercial vendors that *do not* maintain a high level of system availability, we are at their mercy regarding tower space, rent and future modifications

History

- Current system was purchased in August of 2000 and was the most cost effective choice at the time
- Law Enforcement brought onto system in December 2005 & Fire/EMS in July 2007

History - Cost

- Original cost of current system was $11M which included County/End user cost sharing for responder equipment (Radios)
  - County baseline established and County paid 2/3 and the local agencies paid 1/3 of the cost
  - Equipment wanted above baseline was 100% on the agency

Part 2: Planning Ahead

- Present state of radio system
- Evolution over the next 3-5 years
- Could be faced with
- Future state
- Multi-year implementation plan

Present State of Our Radio System

- Current Harris radio system is functioning and handling today's needs
- Capacity has not been compromised
- Very efficient and easy to manage
- No 'End of support' orders have been received to date for "operating system" or OpenSky
- Maintaining interoperability on a County-to-County and County-to-State level
- Our current OpenSky radio system is proprietary and renders its own hurdles for interoperability

Evolution Over The Next 3-5 Years

- Original model radios are now either past end of life or nearing end of life
  - Radios will continue to work after end of life period has expired
  - After 5 years of end of life notice, parts can't be guaranteed for repair
- New models are available and being purchased currently
- Long range planning avoids mission critical failure while taking advantage of procurement and financial opportunities

Could be faced with…

- Stand alone system that may not be supported in the future
- Higher risk of failure by not keeping up with evolving equipment needs
  - Much like the county computer lifecycle plan
- Higher equipment replacement costs due to running past their forecasted life
- Could jeopardize regional funding opportunities
- End user frustration from possible failures, high costs for unplanned equipment upgrades
- Safety concerns to all responders

Future State

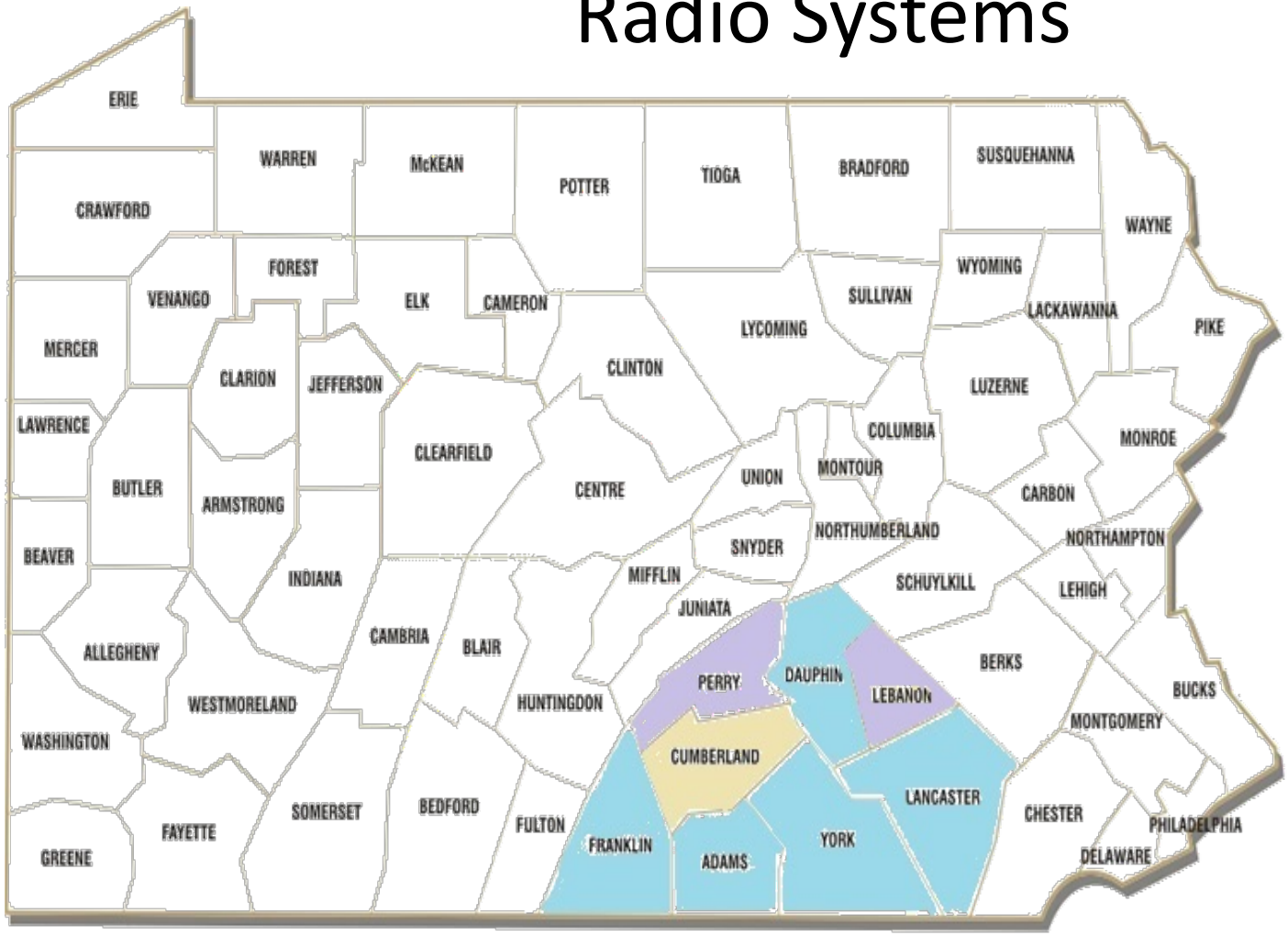
- What is Project 25 (P25)?
  - National Standard for digital radio communications for use by federal, state and local public safety agencies
  - Allows for competitive interoperable multi-vendor solutions for the end user
  - Creates an agnostic radio system approach when crossing borders
  - Born in 1989 as APCO Project 25 and has evolved with time and technology to be the leading standard today and will carry us into the future

Future State

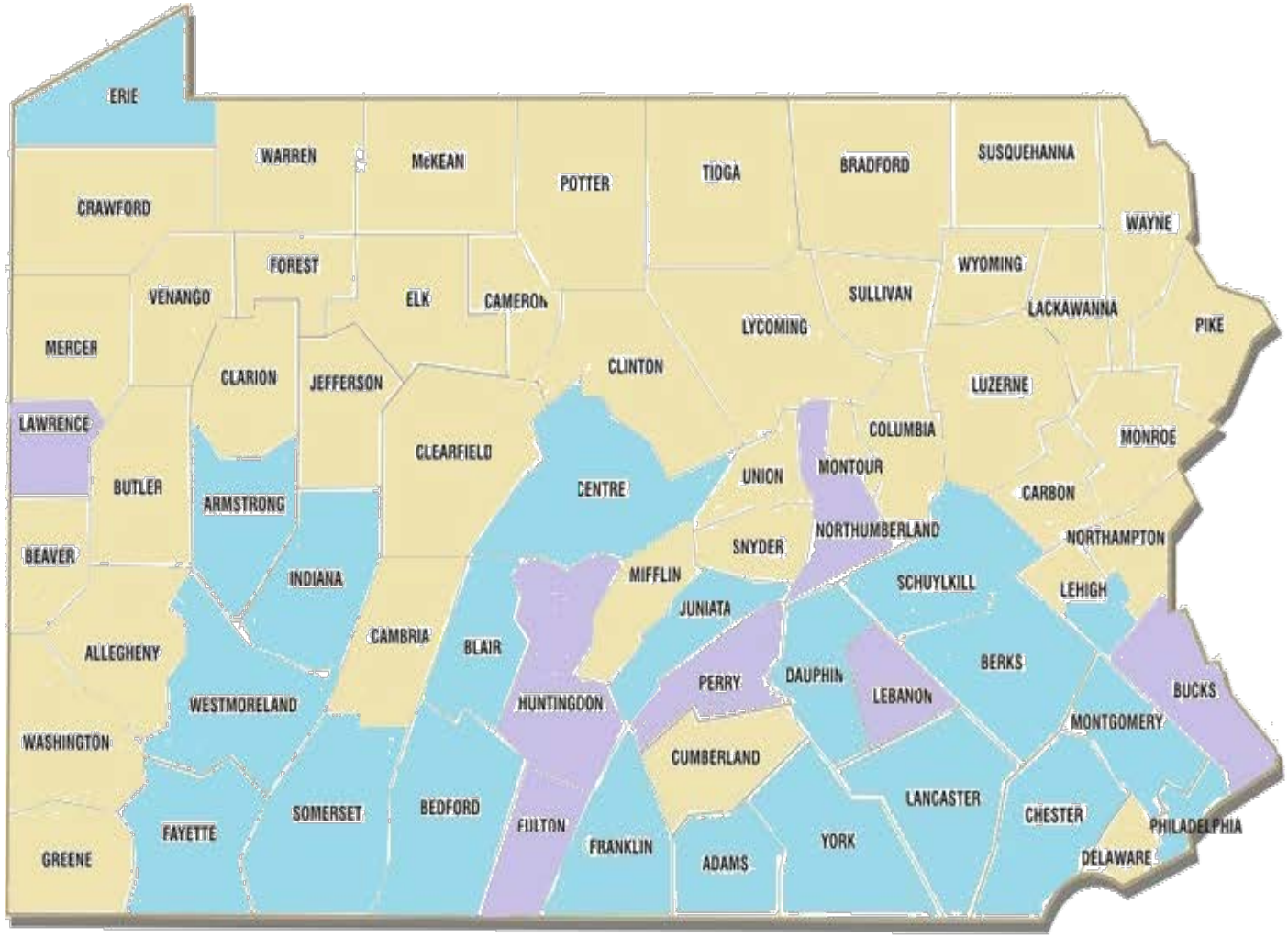
- Since the Project 25 standard has evolved into a nationally adopted system, several PSAP's are moving or have moved in that direction
  - All contiguous Counties have or are transitioning to a Project 25 system
- Potential vendors could include: Harris, Motorola, etc…

South Central Task Force

Radio Systems



Statewide Radio Systems



Multi-Year Implementation Plan

System Elements	Timeline
Vendor Selection & Site Layout Plan Development	2016
Tower replacement	2016 – 2019
Site Layout Plan implementation	2016 - 2019
Radio Infrastructure	2020
Microwave Network	2021
Dispatch Console	2021
End User Radios	2022
System Acceptance & Go-Live	2023

Part 3: Financial Options

- High Level Cost
- Cost drivers
- Funding Objective
- Funding Sources
- Funding Option Example

High Level Cost Figures

System Elements	Range	Timeline
Site Layout Plan / Tower Replacement*	$3-4M	2016-2019
Radio Infrastructure	$9-13.25M	2020
Microwave Network	$2.5-3M	2021
Dispatch Console	$500K-750K	2021
Contingency	$750K-$1M	TBD
Professional Services	$500-600k	2016-2023
Total (Non-discounted pricing)**	**$16-23M**	
County Dept radios (Sheriff, Prison, etc)	Not included in above	
End User Radios	Not included in above	

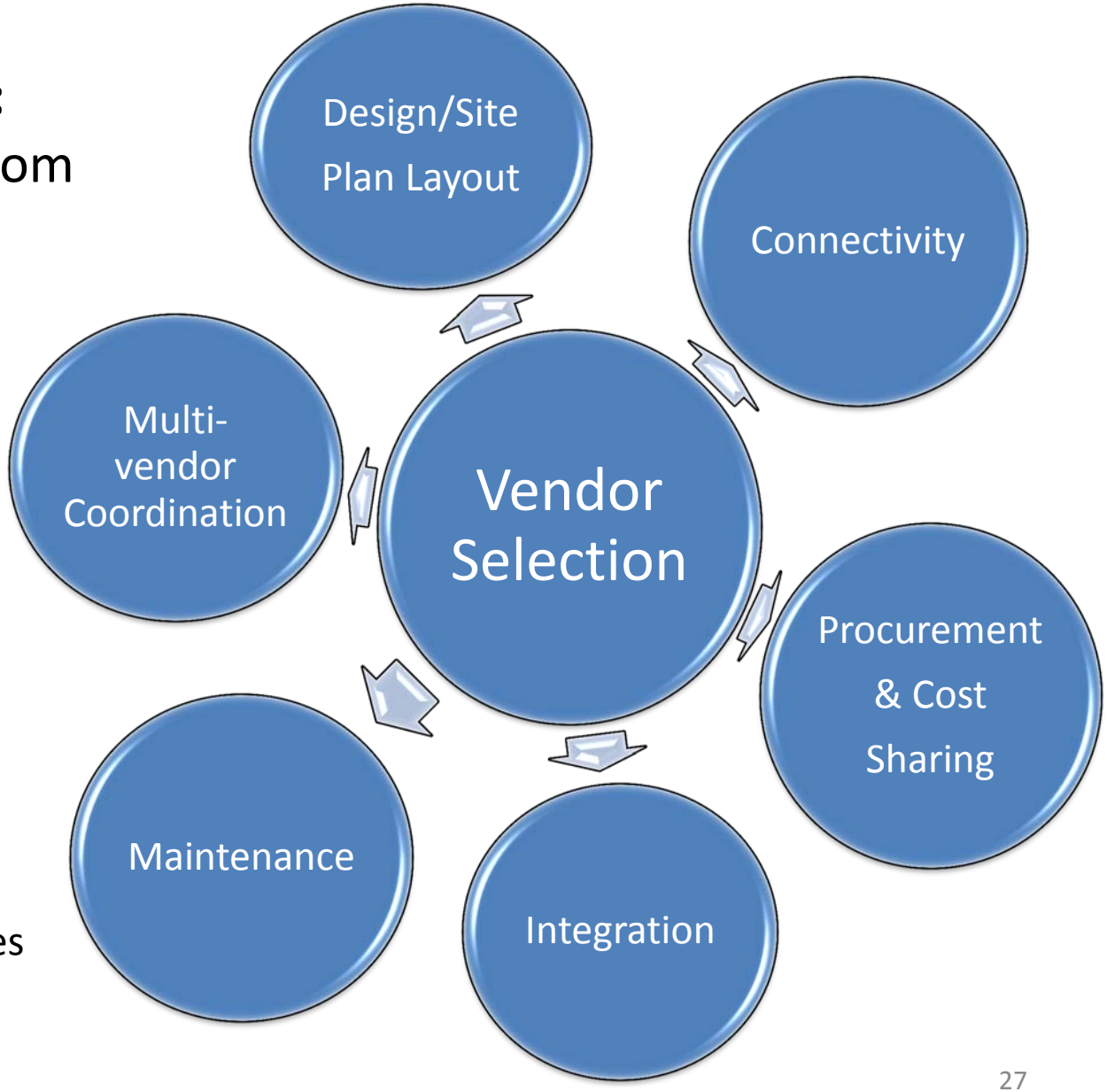
* 2 Towers need to be replaced regardless of future radio project

** Current recurring utilities & maintenance expenses will be dependent on and adjusted based on final system design.

Cost Drivers

The need for expertise:

- Technical expertise from writing specs to implementation
- Multi-vendor coordination
- Multiple moving pieces over a extended project timeline



Comparison: Planning utilizes HRG to coordinate deliverables of vendor agreements for bridge projects

Funding

- Cumberland County has a AAA bond rating
- The project time-line spans through 2022
  - Project will span multiple Board terms
  - Complicated mix of financing
    - Potential multiple bond issues
    - Leverage 911 uniform funding
    - Leverage other financing sources

Funding Objective

- Use bond rating- to leverage funds and minimize impact to the General Fund
- Maximize grant funding, restricted funding, and other revenue sources
- Utilize bond financing
  - When other financing sources are not available
  - Leverage 911 Uniform Funding
- General Fund subsidy

Funding Sources

- Grant
  - Look into potential grant opportunities for the County. Share opportunities we find with all our stakeholders
  - Example of potential grants
    - 15% of the 911 Uniform Funding that is “earmarked” for regionalization initiatives (911 Uniform grant)
    - State and Federal grants
    - Non-profit grants

Funding Sources

- Other Revenue Sources
  - Telecom Lawsuit
  - 911 Uniform Funding
  - Opportunities for coop/cost sharing with adjacent Counties. This could also increase opportunities for the 911 Uniform Grant

Funding Sources

- Bond Financing
  - A low cost option for funding a large part of the project cost
    - Spreads the impact over a longer period of time
    - 911 Uniform Funding may be available to fund principal and interest payments
  - Based on current market conditions, the cost of a $10 million bond issue paid over 12 years is about $950,000 annually (avg. life of the system is 10-15 years)

Funding Sources

- Bond Financing (continued)
  - Repayment will be in the form of either General Fund Subsidy or 911 Uniform funding
  - Bond proceed spending requirements are shorter than the project time-line of project
    - One bond issue
      - Use other funding for beginning and end of project
      - Use bond proceeds for the time period that has the most cost
    - Multiple bond issues over life of project

Funding Sources

- General Fund Subsidy
  - Funding option of last resort
  - Contingency
  - Used when other financing sources are not available
    - Beginning of project
    - End of project
  - Temporary cash flow needs

Funding Option-Example

On the next slide is one example of a funding option

- As the project progresses, recommendations will be made that maximize other funding sources and minimize impact to the General Fund over the life of the project
- Depending on timing of the project, market conditions, available funding, and other changing circumstances and decisions; the funding recommendations will be updated

Example of a Funding Option

[Over the life of the project timeline 2016-2023]

Potential Financing	Amount
Bond	$11,000,000
Uniform Funding	2,000,000
Other Revenue	2,000,000
General Fund Subsidy	1,000,000
Estimated Total	**16,000,000**

* Based on the non-discounted $16m estimate from high level cost figures

Project Procurement

This is a complicated project that will have many “pieces”

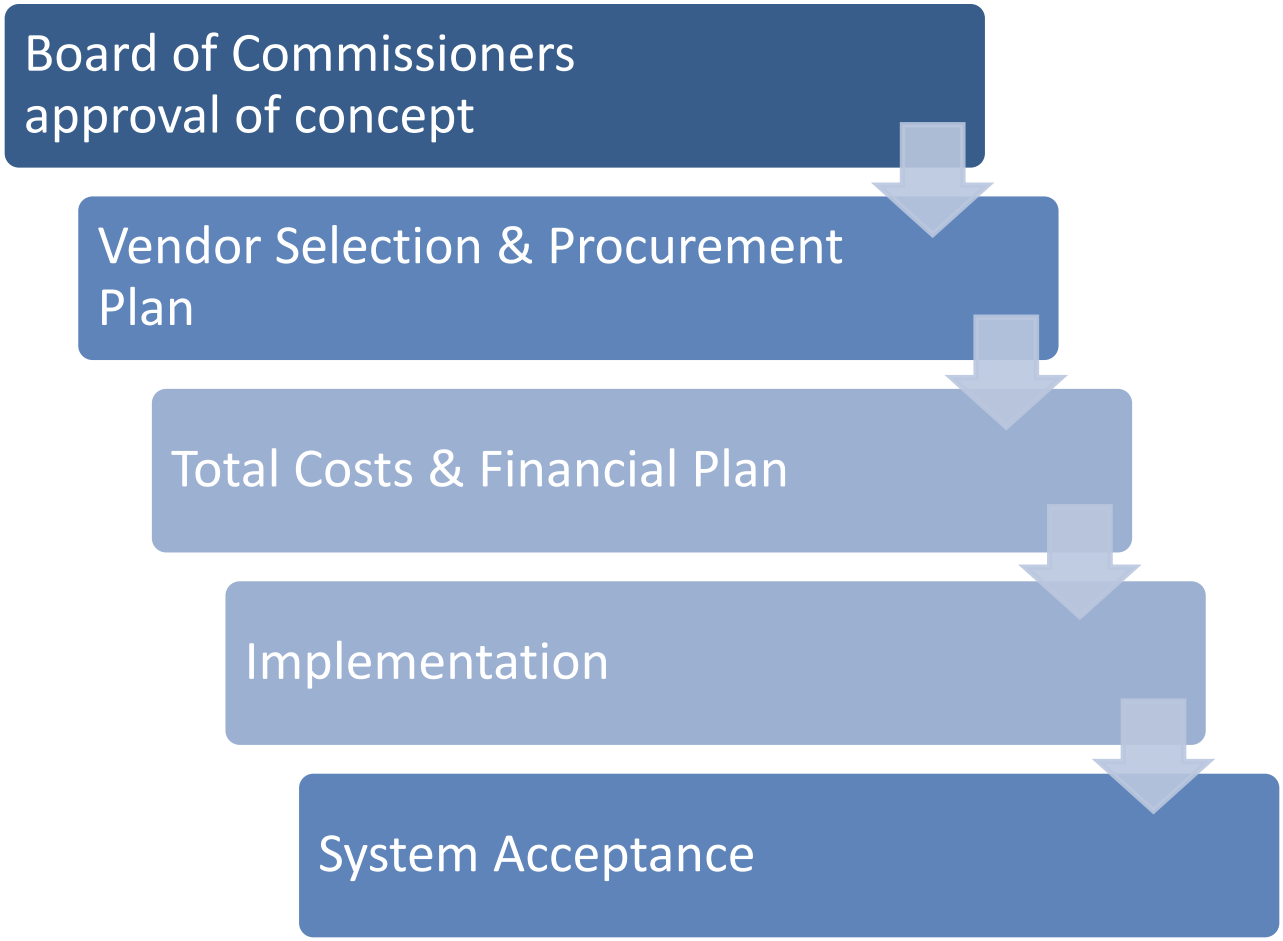
- In a project this size and level of complexity, we will be using a combination of purchasing methods throughout the project (state contract, consortium, bid)

- We will develop a “purchasing plan”
  - Solicitor, Public Safety, and Finance will work closely
  - Pre-determine how we will purchase the “pieces”
  - This will hopefully limit purchasing delays that interrupt the project

Part 4: Outreach with Stakeholders

- External Advisory Board
  - April 14th, 2016
- Police, Fire, EMS Agencies
  - Multiple TBD May/June
- Affected County Department Heads
  - TBD May/June
- Municipal Advisory Board
  - June 14th, 2016

Part 5: Key Decision Points



Questions?