

WISCOM

Budget Recommendations

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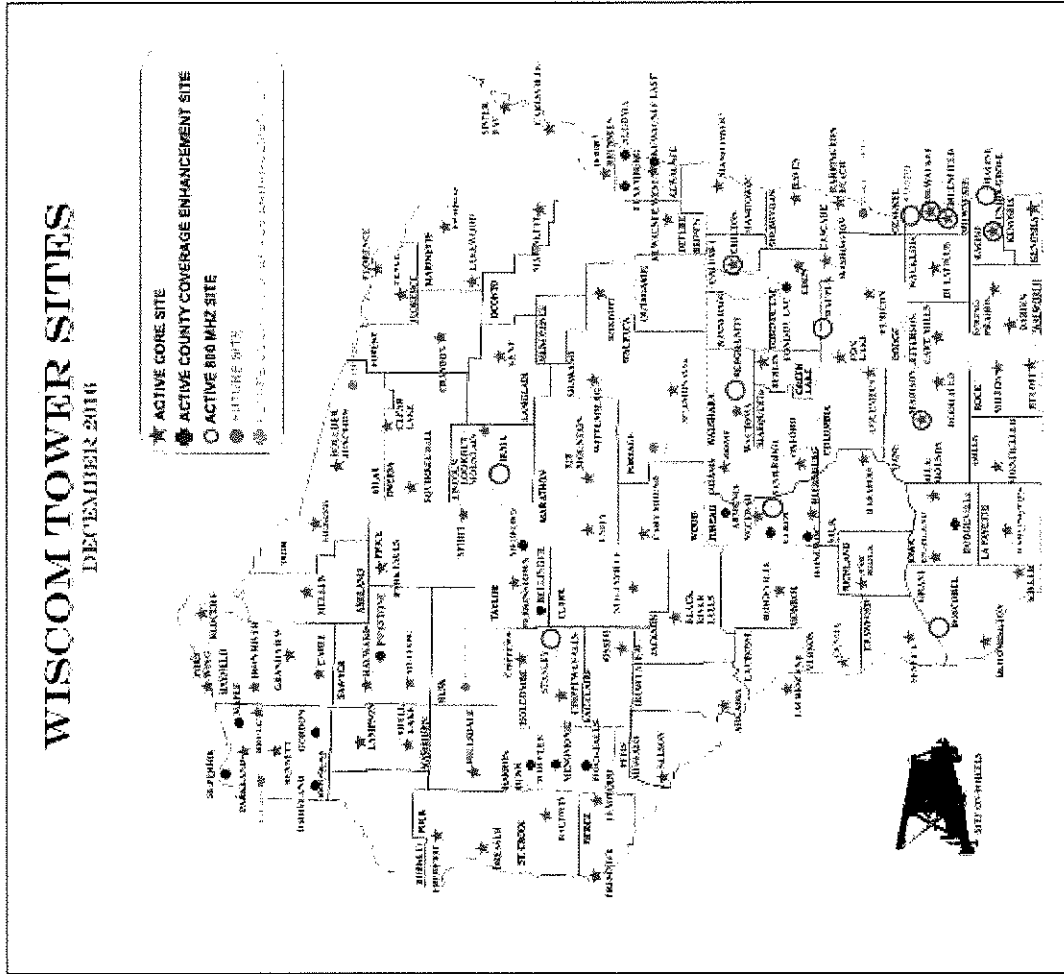
Agenda

- Summary of Issues
 - TUSA – WISCOM REPORT
 - Televate - WISCONSIN PUBLIC SAFETY COMMUNICATIONS GOVERNANCE ASSESSMENT REPORT
- Short-Term Budget Recommendations
 - Mandatory services – required services to ensure WISCOM continues to operate
 - Baseline services – required services to ensure WISCOM gets short-term fixes as well as required optimization recommendations
- Long-Term Budget Recommendations

WISCOM Public Safety Communication System

Public Safety Grade Project 25
Trunked Radio Interoperability
Network

- 116 Radio Sites
- Over 600 Radio Channels
- 23,000 End Users
- 1.5M+ Radio Calls Per Month



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Summary of Issues Identified in TUSA and Telestrate Reports

The top 3 priorities for the State to fund:

1. WISCOM Governance Structure
2. WISCOM Operation and Maintenance
3. Software Support

EFJohnson has classified the balance 9 issues identified in the TUSA report in to 4 service categories by priority:

4. Training
5. Engineering Best Practices and Network Optimization
6. Network Planning
7. 4100 Hardware Refresh and Double Capacity

1. WISCOM Governance Structure

The TUSA and Televate reports have highlighted areas of improvement that EFJohnson agrees should be considered by the State. Some improvements include:

- Make the IC an authoritative policy-making body with independent staff and leadership and the funding support to do the work;
- Reference to Louisiana's model of engagement with the local government and funding model;
- Reference to setting subscriber radio policy with a certification program; and
- Reference to how the operation and maintenance should be structured for State-owned sites and WISCOM local government-owned sites.

2. WISCOM Operation and Maintenance

The TUSA report has highlighted areas of improvement that EFJohnson agrees should be considered by the State. Some improvements include:

- Funding inadequate to support the size of the WISCOM network; and
- Reference to how the operation and maintenance should be structured for State-owned sites and WISCOM local government owned sites.

EFJohnson continues to support the WISCOM technical group with additional free training and support. We continue to do this because it is in our best interest to ensure the WISCOM technical group can effectively support the system, but this is not a long-term sustainable situation.

3. Software Support

TUSA Issue #	Issue	Short-Term Budget Recommendation	Long-Term Budget Recommendation
2	Missed Transmissions/ Dropped Calls (Issue #2)	<ul style="list-style-type: none"> Gather data, analyze problem and provide fix via SW release 	<ul style="list-style-type: none"> N/A

- 6 NMS Issues and Alarms (Issue #6)
 - Address current issues of radio check and inhibit operation as well as enhancements to reporting and alarming capabilities via SW release
 - Re-architect of NMS for large system operations

Budget Request

	Year 1	Year 2
SW Care contract	\$463,900	\$463,900

4. Training

TUSA Issue #	Issue	Short-Term Budget Recommendation	Long-Term Budget Recommendation
4	Training (Issue #4)	<ul style="list-style-type: none"> Create online video content for user radios 	<ul style="list-style-type: none"> N/A

Budget Request

	Year 1	Year 2
Training	\$100,000	

5. Engineering Best Practices

TUSA Issue #	Issue	Short-Term Budget Recommendation	Long-Term Budget Recommendation
7	Installation & Optimization (Issue #7)	For all WISCOM sites: <ul style="list-style-type: none"> • Perform health check • Perform thermal and power loading studies • Perform structural analysis 	<ul style="list-style-type: none"> • Implement the necessary site improvements

Budget Request

	Year 1	Year 2
Installation and Optimization	\$524,000	\$2,225,000

6. Network Planning

TUSA Issue #	Issue	Short-Term Budget Recommendation	Long-Term Budget Recommendation
1	Coverage (Issue #1)	<ul style="list-style-type: none"> Perform coverage study 	<ul style="list-style-type: none"> Identify areas to add RF sites
3	Capacity (Issue #3)	<ul style="list-style-type: none"> Perform traffic study 	<ul style="list-style-type: none"> Identify sites to add RF channels
8	FCC license review (Issue #8)	<ul style="list-style-type: none"> Review existing licenses and determine max ERP at each site (no search for new licenses included in the scope) 	<ul style="list-style-type: none"> Identify additional licenses if more channels are required at any site
9	Intermodulation (Issue #9)	<ul style="list-style-type: none"> Perform intermodulation audit for each site (assumes State has access to all freq., list of users and filtration system at each site) 	<ul style="list-style-type: none"> N/A

Budget Request

	Year 1	Year 2
Network Planning	\$1,068,100	\$600,000

7. 4100 Hardware Refresh and Double Capacity

TUSA Issue #	Issue	Short-Term Budget Recommendation	Long-Term Budget Recommendation
5	Base Station (Issue #5) and Capacity (Issue #3)	<ul style="list-style-type: none"> Refresh all 4100 stations to 4500 platform with P25 Phase II Doubles call capacity in urban centers 	<ul style="list-style-type: none"> Replace last 10 sites

Budget Request

	Year 1	Year 2
Ten (10) 5-ch non-simulcast sites per year	\$1,300,000	\$1,300,000

Budget Recommendations - Next 2 Years

Minimum Recommended

	Year 1	Year 2
Network Planning		
Project Management and Engineering	\$600,000	\$600,000
FCC License Review (Issue #8)	\$113,000	
Intermodulation Study (Issue #9)	\$135,600	
Coverage Analysis (Issue #1)	\$169,500	
Capacity (Issue #3) Traffic Analysis	\$50,000	
Engineering Best Practices and Network Optimization		
Installation and Optimization (Issue #7) Health Check	\$100,000	\$241,000
Site Improvements (Allowance)	\$100,000	\$400,000
Generator Load (Engineering)	\$135,000	\$135,000
Tower Loading (Engineering)	\$135,000	\$135,000
HVAC Load (Engineering)	\$54,000	\$54,000
Site Prep-Shelter, Grounding, Site Civils (Allowance)		\$1,260,000
Training		
End User Training (Issue #4)	\$100,000	
LMR Infrastructure Software Support		
ATLAS Software Care	\$463,900	\$463,900
Missed Transmissions and Dropped Calls (Issue #2)	\$0	
NMS and Alarms (Issue #6)	\$0	
4100 Refresh and Double Capacity		
Ten 5-channel Sites	\$1,300,000	\$1,300,000
Total	\$3,456,000	\$4,589,000

Long-Term Options

- A. Sustain the current system and limit coverage and capacity.
- B. Continue to migrate current 4100 and then 3800 to P25 Phase II as the number of users grow and improve coverage requirements on an as-needed basis.
- C. Go to RFP for a fork lift replacement or managed service contract.

Questions??

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