

Wyoming Radio Survey Federal Engineering Inc.
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Survey for the State of Wyoming Public Safety Mobile Communications Planning
Project

INSTRUCTIONS: Start by clicking the blank space at the right of "Your Name
-- First." Fill in each field in sequence. Use the <Tab> key to move to
the next fields (Don't use the <Enter> key for this!) Scroll-down the
page using your mouse along the scroll-bar on the right side of your
screen. Leave answers blank when not known. Fields marked R are required
data. Thank you. Back to Opening Web Page

Section 1: Your Identification Please
R Your Name--First: MI: Last:
R Your Title/Position
Employee/Badge #
R Organization Name
R Type of Organization Select one of these... City EMS City Fire City
Government City Police City Sanitation City School City Utility City
Misc County DA County Fire County Health County Jail County Probation
County Sheriff County School County Misc State Fire State Police/Highway
Patrol State DOT State Maintenance State Agriculture State Attorney
General State Education State Game and Fish State EMS State Misc Federal
FBI Federal BLM Federal BIA Federal FS Federal Misc Commercial Misc
Private Higher Education Other
If above is "Misc or Other" please enter Type
R Address line 1
Address line 2
R City
R County
R State and Zip Code State: Zip:
R Work Phone () -
Cell Phone () -
Fax Phone () -
E-mail Address
R Contact preference Work Phone Cell Phone Fax E-mail

Section 2: Your Present Radio System(s) by Frequency Band
Does your organization use the VHF Low, 220 MHz, 700 MHz, and/or 4.9 GHz
band(s)? Check all used bands.

VHF Low Band 220 MHz Band 700 MHz Band 4.9 GHz Band

Note: If you have more than 5 licenses/RFAs, multiple base
stations/repeaters, towers, locations, frequencies or one of the listed
bands above, please download additional survey information spreadsheets in
either MS Excel or Corel Quattro Pro (right click and select "Save Target
As..."), fill in needed information, and email completed form to:
wyomingsurvey@fedeng.com

VHF HIGH Band (150-175 MHz) Back Up Next Band

General Information:

R Does your organization use this Band? No Yes

The FCC license/NTIA RFA callsign(s)

The FCC license/NTIA RFA expiration date(s)

The FCC licensee/NTIA RFA name is

How many licenses/RFAs do you have?

This system is used by your organization on a Shared Exclusive basis

If shared, with which other organizations?

What is the coverage area?

The geographic coverage of this system is Adequate Inadequate

The number of channels in this system is

The present number of channels is Adequate Inadequate

Normal annual peak number of simultaneous users

Describe traffic volume and seasonal patterns

What is the base station/repeater transmit frequency? MHz

What is the base station/repeater receive frequency? MHz

Additional number of channels needed When?

Is mobile data implemented? No Yes Planned - When?

Is voice encryption implemented? No Yes Planned - When?

Is trunking implemented? No Yes Planned - When?

Is digital modulation implemented? No Yes Planned - When?

Is narrow channel bandwidth (1/2 normal) implemented? No Yes Planned - When?

Base Stations/Repeaters:

Number of base stations/repeaters in the system

Transmitter power watts

Total transmit line loss dB

Transmit ERP watts

Receiver sensitivity uV

Total receive line loss dB

Antenna gain dB

Antenna pattern Omni Directional

If directional, give details

Antenna height feet

Feedline length feet

Feedline type

Tower Site Information:

Site ownership Owned Leased

Location: Longitude degrees minutes seconds

Location: Latitude degrees minutes seconds

Tower height feet

Site elevation feet

Tower type Select one of these choices... self-support guyed monopole

Age/Condition

Are there other antennas on this tower? No Yes

If yes, how many?

Quality of lightning protection/grounding system Adequate Inadequate

Shelter structure description/condition

Describe access to site (difficulty, distance to main road, transport needed, etc.)

HVAC systems: Heating No Yes

Ventilation No Yes

Air Conditioning No Yes

Primary site power: Commercial Generator Solar

If generator is used:

Generator capacity watts

Does generator supply equipment, HVAC, and utility power? No Yes
Generator fuel type Select one of these choices... Gasoline Diesel
Natural Gas Propane Other
Generator runtime hours
Does site have an UPS? No Yes
If yes, capacity watts
Does it supply power to more than the radio equipment? No Yes
UPS runtime at full load, without commercial/generator power hours
Describe site security/alarms
Describe shelter security/alarms
Vehicle Radios:
Number of vehicle units in the system of which are data-capable
List typical vehicle specifications: Transmit power: watts
Receiver sensitivity: uV
Antenna gain: dB
Average age: years
Portable Radios:
Number of portable units in the system of which are data-capable
List typical portable specifications: Transmit power: watts
Receiver sensitivity: uV
Antenna height: feet
Average age: years
List typical portable accessories
Do you use in-vehicle repeaters/extenders? No Yes
If yes, are they in-band or cross-band? In-band Cross-band
What is the repeater/extender transmit frequency? MHz
What is the repeater/extender receive frequency? MHz
Control Station Radios/Dispatch:
Number of control stations in the system
Average age years
Number of dispatch locations in the system
Number of dispatch consoles in the system
Are either the dispatch locations or consoles shared with other
organizations? No Yes
If yes, with whom?
System Information:
Is this system subject to interference from other radio users? No
Occasional Objectionable
Is this system subject to static? No Occasional Objectionable
The radio system is maintained by Select one of these choices... Radio
Dealer Factory Service Wireless Service Self-Maintained Other Agency
Agreement Combination of Services
If either Other Agency Agreement or Combination is selected, please
specify:
List in-house test/programming equipment
In-house test/programming equipment is Adequate Inadequate
List in-house spare equipment
In-house spare equipment is Adequate Inadequate
Annual system maintenance budget/costs:
Loaded Labor Hours\$
Periodic Recapitalization of User Equipment\$
Facility Lease Costs\$
Telco Costs\$
Backbone Microwave Maintenance Costs\$
Other Maintenance Costs\$
Please Specify What "Other" Includes
Total Annual system maintenance budget\$

Please Rank System Problems in Priority Order 1=highest

Statewide Coverage 1 2 3 4 5

System Reliability 1 2 3 4 5

Interoperability 1 2 3 4 5

Congestion 1 2 3 4 5

Interference 1 2 3 4 5

Your remarks and comments please, below. Please elaborate.

UHF Band (450-470 MHz) Back Up Next Band

General Information:

R Does your organization use this band? No Yes

The FCC license/NTIA RFA callsign(s)

The FCC license/NTIA RFA expiration date(s)

The FCC licensee/NTIA RFA name is

How many licenses/RFAs do you have?

This system is used by your organization on a Shared Exclusive basis

If shared, with which other organizations?

What is the coverage area?

The geographic coverage of this system is Adequate Inadequate

The number of channels in this system is

The present number of channels is Adequate Inadequate

Normal annual peak number of simultaneous users

Describe traffic volume and seasonal patterns

What is the base station/repeater transmit frequency? MHz

What is the base station/repeater receive frequency? MHz

Additional number of channels needed When?

Is mobile data implemented? No Yes Planned - When?

Is voice encryption implemented? No Yes Planned - When?

Is trunking implemented? No Yes Planned - When?

Is digital modulation implemented? No Yes Planned - When?

Is narrow channel bandwidth (1/2 normal) implemented? No Yes Planned - When?

Base Stations/Repeaters:

Number of base stations/repeaters in the system

Transmitter power watts

Total transmit line loss dB

Transmit ERP watts

Receiver sensitivity uV

Total receive line loss dB

Antenna gain dB

Antenna pattern Omni Directional

If directional, give details

Antenna height feet

Feedline length feet

Feedline type

Tower Site Information:

Site ownership Owned Leased

Location: Longitude degrees minutes seconds

Location: Latitude degrees minutes seconds

Tower height feet

Site elevation feet

Tower type Select one of these choices... self-support guyed monopole

Age/Condition

Are there other antennas on this tower? No Yes

If yes, how many?

Quality of lightning protection/grounding system Adequate Inadequate

Shelter structure description/condition
Describe access to site (difficulty, distance to main road, transport needed, etc.)
HVAC systems:Heating No Yes
Ventilation No Yes
Air Conditioning No Yes
Primary site power:Commercial Generator Solar
If generator is used:
Generator capacity watts
Does generator supply equipment, HVAC, and utility power? No Yes
Generator fuel type Select one of these choices... Gasoline Diesel
Natural Gas Propane Other
Generator runtime hours
Does site have an UPS? No Yes
If yes, capacity watts
Does it supply power to more than the radio equipment? No Yes
UPS runtime at full load, without commercial/generator power hours
Describe site security/alarms
Describe shelter security/alarms
Vehicle Radios:
Number of vehicle units in the system of which are data-capable
List typical vehicle specifications:
Transmit power: watts
Receiver sensitivity: uV
Antenna gain: dB
Average age: years
Portable Radios:
Number of portable units in the system of which are data-capable
List typical portable specifications:
Transmit power: watts
Receiver sensitivity: uV
Antenna height: feet
Average age: years
List typical portable accessories
Do you use in-vehicle repeaters/extenders? No Yes
If yes, are they in-band or cross-band? In-band Cross-band
What is the repeater/extender transmit frequency? MHz
What is the repeater/extender receive frequency? MHz
Control Station Radios/Dispatch:
Number of control stations in the system
Average age years
Number of dispatch locations in the system
Number of dispatch consoles in the system
Are either the dispatch locations or consoles shared with other organizations? No Yes
If yes, with whom?
System Information:
Is this system subject to interference from other radio users? No
Occasional Objectionable
Is this system subject to static? No Occasional Objectionable
The radio system is maintained by Select one of these choices... Radio
Dealer Factory Service Wireless Service Self-Maintained Other Agency
Agreement Combination of Services
If either Other Agency Agreement or Combination is selected, please specify:
List in-house test/programming equipment
In-house test/programming equipment is Adequate Inadequate

List in-house spare equipment
In-house spare equipment is Adequate Inadequate
Annual system maintenance budget/costs:
Loaded Labor Hours\$
Periodic Recapitalization of User Equipment\$
Facility Lease Costs\$
Telco Costs\$
Backbone Microwave Maintenance Costs\$
Other Maintenance Costs\$
Please Specify What "Other" Includes
Total Annual system maintenance budget\$
Please Rank System Problems in Priority Order 1=highest
Statewide Coverage 1 2 3 4 5
System Reliability 1 2 3 4 5
Interoperability 1 2 3 4 5
Congestion 1 2 3 4 5
Interference 1 2 3 4 5

Your remarks and comments please, below. Please elaborate.

800/900 MHz Band Back Up Next Section
General Information:
R Does your organization use this band?No Yes
The FCC license/NTIA RFA callsign(s)
The FCC license/NTIA RFA expiration date(s)
The FCC licensee/NTIA RFA name is
How many licenses/RFAs do you have?
This system is used by your organization on a Shared basis Exclusive
basis
If shared, with which other organizations?
What is the coverage area?
The geographic coverage of this system is Adequate Inadequate
The number of channels in this system is
The present number of channels is Adequate Inadequate
Normal annual peak number of simultaneous users
Describe traffic volume and seasonal patterns
What is the base station/repeater transmit frequency? MHz
What is the base station/repeater receive frequency? MHz
Additional number of channels needed When
Is mobile data implemented? No Yes Planned - When?
Is voice encryption implemented? No Yes Planned - When?
Is trunking implemented? No Yes Planned - When?
Is digital modulation implemented? No Yes Planned - When?
Base Stations/Repeaters:
Number of base stations/repeaters in the system
Transmitter power watts
Total transmit line loss dB
Transmit ERP watts
Receiver sensitivity uV
Total receive line loss dB
Antenna gain dB
Antenna patternOmni Directional
If directional, give details
Antenna height feet
Feedline length feet
Feedline type
Tower Site Information:

Site ownership Owned Leased
Location: Longitude degrees minutes seconds
Location: Latitude degrees minutes seconds
Tower height feet
Site elevation feet
Tower type Select one of these choices... self-support guyed monopole
Age/Condition
Are there other antennas on this tower? No Yes
If yes, how many?
Quality of lightning protection/grounding system Adequate Inadequate
Shelter structure description/condition
Describe access to site (difficulty, distance to main road, transport
needed, etc.)
HVAC systems:Heating No Yes
Ventilation No Yes
Air Conditioning No Yes
Primary site power:Commercial Generator Solar
If generator is used:
Generator capacity watts
Does generator supply equipment, HVAC, and utility power? No Yes
Generator fuel type Select one of these choices... Gasoline Diesel
Natural Gas Propane Other
Generator runtime hours
Does site have an UPS? No Yes
If yes, capacity watts
Does it supply power to more than the radio equipment? No Yes
UPS runtime at full load, without commercial/generator power hours
Describe site security/alarms
Describe shelter security/alarms
Vehicle Radios:
Number of vehicle units in the system of which are data-capable
List typical vehicle specifications:
Transmit power: watts
Receiver sensitivity: uV
Antenna gain: dB
Average age: years
Portable Radios:
Number of portable units in the system of which are data-capable
List typical portable specifications:
Transmit power: watts
Receiver sensitivity: uV
Antenna height: feet
Average age: years
List typical portable accessories
Do you use in-vehicle repeaters/extenders? No Yes
If yes, are they in-band or cross-band? In-band Cross-band
What is the repeater/extender transmit frequency? MHz
What is the repeater/extender receive frequency? MHz
Control Station Radios/Dispatch:
Number of control stations in the system
Average age years
Number of dispatch locations in the system
Number of dispatch consoles in the system
Are either the dispatch locations or consoles shared with other
organizations? No Yes
If yes, with whom?
System Information:

Is this system subject to interference from other radio users? No Occasional Objectionable
Is this system subject to static? No Occasional Objectionable
The radio system is maintained by Select one of these choices... Radio Dealer Factory Service Wireless Service Self-Maintained Other Agency Agreement Combination of Services

If either Other Agency Agreement or Combination is selected, please specify:

List in-house test/programming equipment
In-house test/programming equipment is Adequate Inadequate
List in-house spare equipment

In-house spare equipment is Adequate Inadequate

Annual System Maintenance Budget/Costs:

Loaded Labor Hours\$

Periodic Recapitalization of User Equipment\$

Facility Lease Costs\$

Telco Costs\$

Backbone Microwave Maintenance Costs\$

Other Maintenance Costs\$

Please Specify What "Other" Includes

Total Annual system maintenance budget\$

Please Rank System Problems in Priority Order 1=highest

Statewide Coverage 1 2 3 4 5

System Reliability 1 2 3 4 5

Interoperability 1 2 3 4 5

Congestion 1 2 3 4 5

Interference 1 2 3 4 5

Your remarks and comments please, below. Please elaborate.

Commercial Alternatives Back Up Next Section

Has your organization tried or considered alternatives to land mobile radio? No Yes

Which commercial alternative wireless technologies have been tried by your organization? Select one of these choices... Cellular

Phone PCS Phone Satellite Phone Commercial PLMR Shared PLMR

Unlicensed wireless Combination of above Other

If above is "Other" or "Combination of above" please enter type(s)

Were the results of trying alternative wireless technology satisfactory? Unsatisfactory Partly Satisfactory Highly Satisfactory

If the results of using alternative commercial services were less than highly satisfactory, please elaborate.

Back Up Back to Start Section 3: Future Radio System Needs

This is your opportunity to convey your ideas for an improved public safety radio system. Please be thoughtful and creative. Your responses will be studied and combined with others to develop communication system requirements. Thank you.

Please describe all public safety radio system improvements/additions that were funded by October 2002.

Base StationsQuantity Budget \$ Estimated Implementation Date
RepeatersQuantity Budget \$ Estimated Implementation Date
Vehicle UnitsQuantity Budget \$ Estimated Implementation Date
Portable UnitsQuantity Budget \$ Estimated Implementation Date
Control StationsQuantity Budget \$ Estimated Implementation Date
Dispatch ConsolesQuantity Budget \$ Estimated Implementation Date
Dispatch LocationsQuantity Budget \$ Estimated Implementation Date
Mobile Data TerminalsQuantity Budget \$ Estimated Implementation Date
Date
Radio ChannelsQuantity Budget \$ Estimated Implementation Date
Other Growth Components (provide description, quantities, budget, and estimated implementation dates in text box)

Please estimate all other expected growth requirements in your system(s) over the next 5 years, not described above.

Number of additional base stations
Number of additional vehicle units
Number of additional portable units
Number of additional control stations
Number of additional dispatch consoles
Number of additional mobile data terminals
Number of additional radio channels
Other growth components

Does your organization need to communicate using PSMC voice communications with other organizations which cannot now be done? No Yes

Which other organizations?

How important is your need for this additional PSMC communication capability? Optional Regular Ops Mission Critical

Does your organization need to communicate using PSMC data with other organizations which cannot now be done? No Yes

Which other organizations?

How important is your need for PSMC data communication capability? Optional Regular Ops Mission Critical

Does your organization require encryption (scrambling) for voice or data PSMC communications? No Yes

How important is your need for encrypted PSMC communication capability? Optional Regular Ops Mission Critical

Homeland Security: In light of recent events, what other system features or capabilities would be required to enhance "homeland security?"

Please Rate Future Enhanced Features You Will Need To Provide For Resolving Life/Safety Issues That Are Not Currently Being Met
Statewide Roaming Coverage Low Medium High
Automatic Vehicle Location Low Medium High

Mobile Card Swipe (see note 1) Low Medium High
Mobile Data Access (see note 2) Low Medium High
Mobile E-mail Low Medium High
Mobile Identification Low Medium High
Mobile Printing Low Medium High
Mobile Video Low Medium High
Mobile Voicemail Low Medium High
Paging Low Medium High
Other Low Medium High
Other Low Medium High

NOTES:

1. Used for driver's licenses when equipped with magnetic stripe, shift sign-on/off with smartbadges, other mag stripe applications.
2. Wants & Warrants, NCIC, Incident Report, other databases.

What other features, benefits, design considerations, and general input do you have to offer concerning your future radio system requirements? Your comments please.

Section 4: Last Step -- Read Carefully R Are all Required Fields completed? Check back and be sure! No Yes
If one or more Required fields were left blank, an error window will remind you to fill in the necessary field. Just find the blank Required field and fill it in. Then click the Submit Survey Data button again.

Thank You for Participating in the Planning Survey!

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