### Bonner County Public Safety Communications Proposed Radio Projects List

Prepared By: Bonner County Communications Advisory Board Technical Advisory Committee

January 2012

### **Table of Contents**

A۱	oout This Document	3
	Purpose	3
	Organization	3
	Assignment of Priority	4
1.	Continued Operation of Existing Networks	5
	A) 911	5
	B) Baldy	7
	C) Schweitzer	8
	D) Hoodoo	8
	E) Courthouse	
	F) Administrative Building	
	G) Priest River	
	H) Clark Fork	10
	I) Samuels	10
	J) Sundance	10
	K) CCBFD	
	L) Little Blacktail	
	M) Mobiles & Portables	
2.	Transition of BCSO to VHF	
	A) 911	
	B) Baldy	
	C) Schweitzer	
	D) Hoodoo	
	E) Courthouse	
	F) Administrative Building	
	G) Priest River	
	H) Clark Fork	
	I) Samuels	
	J) Sundance	
	K) CCBFD	
	L) Little Blacktail	
	M) Mobiles & Portables	17

#### **About This Document**

#### **Purpose**

This document describes technical projects for public safety radio communication within Bonner County. Administrators can use this list to anticipate necessary budget requirements. Additionally the list provides "shovel ready projects" so that administrators can quickly act when grant opportunities become available.

This list, prepared by a technical committee, is presented to the Bonner County Communications Advisory Board. That board will then prepare its recommendation to the Bonner County Board of County Commissioners as their official recommendation.

#### Organization

Projects have been sorted into two groups:

- 1) Continued Operation of Existing Networks.
- 2) Transition of Bonner County Sheriff's Office to the VHF band.

Within those groups the projects have been further sorted by their associated sites:

- A) 911
- B) Baldy
- C) Schweitzer
- D) Hoodoo
- E) Courthouse
- F) Admin Building
- G) Priest River
- H) Clark Fork
- I) Samuels
- J) Sundance
- K) CCBFD
- L) Little Blacktail
- M) Mobiles & Portables

This allows us to assign each project a unique Project ID that identifies the group and site for each project. Example: 1B2 identifies the second project from Group 1 for the Baldy site and 2F1 identifies the first project from Group 2 for the Priest River site.

In some cases there are projects, like microwave network paths, that involve multiple sites. Those projects, because they impact the network as a whole, have been included as part of the 911 site.

#### Assignment of Priority

Each project has been assigned a priority as follows:

- 1) Critical: Failure of a system is imminent due to such things as technical deficiency or legal requirements. Failure of the system at risk would result in a disruption of public safety communications on a network scale. This project must be completed for continued operation of the system.
- 2) High: Systems are functioning adequately at this time. However, reliability of the system is questionable and this project is necessary to restore confidence in reliability. Infrastructure investment may be at risk. Failure of the system at risk would disrupt a portion of the public safety communications system.
- 3) Medium: Systems are functioning adequately at this time and considered reliable. However, insufficient resources exist to restore service in the event of a failure or other emergency. Also applies to any project with a deadline such as an FCC license or grant expiration within two fiscal years.
- 4) Routine: Execute these projects as time and budget allows.

The following table lists project ID by the priority assigned to each:

Priority	Projects
1	1C2
2	1B1, 1B2, 1B3, 1D1
3	1A1, 1A2, 1A3, 1A4,1B4, 1K1
4	1A5, 1A6, 1C1, 1E1, 1F1, 1G1, 1H1, 1I1, 1K2, 1L1, 1L2, 1M1, 2A1, 2B1, 2C1, 2D1, 2E1, 2F1, 2G1, 2H1, 2I1, 2J1, 2L1, 2M1

### 1. Continued Operation of Existing Networks

#### A) 911

Project ID: 1A1 Budget: \$30,000 Prerequisites: 1C2 Priority: 3

Description: Installation of high reliability, high bandwidth FCC licensed microwave network path between 911 and the State of Idaho Schweitzer Mountain radio site. Required for interconnection of radio sites. Also allows interconnection to State of Idaho radio and data networks.

Budget Items: Microwave radio system, installation, FCC Licensing & Coordination.

Major Goals: ⊠ Improve Reliability ⊠ Improve Coverage ⊠ Emergency Preparedness ⊠ Transition BCSO to VHF ⊠ Interoperability

Other Notes: May also improve speed and performance of the Bonner County connection to the ILETS network.

Project ID: 1A2 Budget: \$25,000 Prerequisites: 1A1, 1B1, 1B2, 1B3 Priority: 3

Description: Installation of high reliability, high bandwidth FCC licensed microwave network path between the State of Idaho Schweitzer Mountain radio site and the Sandpoint Baldy radio site. Required for interconnection of radio sites. Also allows interconnection to State of Idaho radio and data networks.

Budget Items: Microwave radio system, installation, FCC Licensing & Coordination.

Major Goals: ⊠ Improve Reliability ⊠ Improve Coverage ⊠ Emergency Preparedness ⊠ Transition BCSO to VHF ⊠ Interoperability

Other Notes:

Project ID: 1A3 | Budget: \$30,000 | Prerequisites: 1A1, 1A2, 1B1, 1B2, 1B3 | Priority: 3

Description: Installation of high reliability, high bandwidth FCC licensed microwave network path between the Bonner County Administrative Building and the Sandpoint Baldy radio site. Required for interconnection of radio sites. Also allows interconnection to State of Idaho radio and data networks.

Budget Items: Microwave radio system, installation, FCC Licensing & Coordination.

Major Goals: ⊠ Improve Reliability ⊠ Improve Coverage ⊠ Emergency Preparedness ⊠ Transition BCSO to VHF ⊠ Interoperability

Other Notes:

Project ID: 1A4	Budget: \$28,000	Prerequisites:	Priority: 3
and additional cha		Raytheon SNV-12 devices to provide hot sing. One unit for the EMS / fire dispatch etwork.	5
Budget Items: Re	eceiver voters with sit	e cards	
Major Goals: ⊠ II ☑ Transition BC	mprove Reliabilitv SO to VHF ⊠ Inter	⊠ Improve Coverage ⊠ Emergency I operability	Preparedness
Other Notes:			
Project ID: 1A5	Budget: \$9,000	Prerequisites:	Priority: 4
Description: Obtain transportable rack containers and install UHF and VHF repeater systems into them. This allows them to be safely transported to sites for rapid deployment of parts or for use as backup radio systems. It also allows them to be deployed as tactical repeater or base station radios or for use as crossband repeaters or gateways.			
Budget Items: Tr	ansportable rack cont	ainers, power supplies, filters, antenna sys	stems, installation.
Major Goals: ☐ II☐ Transition BC	mprove Reliabilitv SO to VHF ⊠ Inter	☐ Improve Coverage 図 Emergency I operability	Preparedness
Other Notes:			
Project ID: 1A6	Budget: \$9,000	Prerequisites:	Priority: 4
Description: Add capability to the existing radio programming / training notebook computer packages that will allow them to be used as remote dispatch consoles. This also allows them to be used to control / configure patching of radio networks (portable gateway control) in the field.			
Budget Items: IP console software, headsets, installation, containers, documentation, training.			
Major Goals: ☐ Improve Reliability ☐ Improve Coverage ☒ Emergency Preparedness ☐ Transition BCSO to VHF ☒ Interoperability			
Other Notes:			

# B) Baldy

Project ID: 1B1	Budget: \$5,000	Prerequisites:	Priority: 2
Description: Create a ground halo for the building and an improvised station ground. Connect this station ground to electrical ground. Connect all equipment in the building to the improvised station ground.			
Budget Items: H	ardware, cable, install	ation.	
Major Goals: ⊠ II	mprove Reliabilitv SO to VHF □ Inter	☐ Improve Coverage ☐ Emergency   operability	Preparedness
Other Notes:			
Project ID: 1B2	Budget: \$6,000	Prerequisites:	Priority: 2
Reinforce the seco	ond floor so that it can	seal all openings. Provide ventilation and a support weight or remove that floor. Isolo provide improved environmental control.	late public safety
Budget Items: M	aterials and installation	on.	
Major Goals: ⊠ II  ☐ Transition BC	mprove Reliabilitv SO to VHF □ Inter	☐ Improve Coverage ☐ Emergency   coperability	Preparedness
Other Notes:			
Project ID: 1B3	Budget: \$9,000	Prerequisites: IB1, IB2	Priority: 2
		up system has exceeded its anticipated end oject will replace this battery system to pro	
Budget Items: M	aterials and installation	on.	
Major Goals: ⊠ II  ☐ Transition BC	mprove Reliabilitv SO to VHF □ Inter	☐ Improve Coverage ☐ Emergency   operability	Preparedness
Other Notes:			
Project ID: 1B4	Budget: \$5,000	Prerequisites:	Priority: 3
Description: Installation of telemetry equipment that allows technical staff to monitor conditions at the site. Will also alert said staff of urgent events (i.e. Power failure, intrusion, etc.). Provides the ability to remotely control some functions (i.e. switching to a backup radio, rebooting, etc.).			
Budget Items: Telemetry equipment, installation.			
Major Goals: ⊠ Improve Reliability □ Improve Coverage □ Emergency Preparedness □ Transition BCSO to VHF □ Interoperability			
Other Notes:			

## C) Schweitzer

Project ID: 1C1	Budget: \$5,000	Prerequisites:	Priority: 4		
the site. Will also	Description: Installation of telemetry equipment that allows technical staff to monitor conditions at the site. Will also alert said staff of urgent events (i.e. Power failure, intrusion, etc.). Provides the ability to remotely control some functions (i.e. switching to a backup radio, rebooting, etc.).				
Budget Items: Te	elemetry equipment, in	nstallation.			
Major Goals: ⊠ II	mprove Reliabilitv SO to VHF □ Inter	☐ Improve Coverage ☐ Emergency operability	Preparedness		
Other Notes:					
Project ID: 1C2	Budget: \$10,000	Prerequisites:	Priority: 1		
Description: Move of equipment from existing building to temporary facility then moved again into the new facility. This will include the purchase of any necessary battery or hardware to allow our use of the new facility and compliance with site standards. This is necessary because the existing facility is to be demolished 6/2012 and a new facility in place 10/2012.					
Budget Items: Labor. Hardware. Batteries.					
Major Goals: ⊠ Improve Reliability □ Improve Coverage □ Emergency Preparedness □ Transition BCSO to VHF □ Interoperability					
Other Notes: This project is driven by the State of Idaho.					

## D) Hoodoo

Project ID: 1D1	Budget: \$53,000	Prerequisites:	Priority: 2
Description: Installation of VHF equipment on the site to be connected to the Law Enforcement Dispatch Network. This will allow law enforcement to use VHF radios within range of this site. This provides immediate operable and interoperable communications with Pend Oreille County Sheriff's Office, Bonner County Sheriff's Office and Priest River Police.			
Budget Items: VHF repeater system, antenna system, combiner network, tower components, building modification.			
Major Goals: ⊠ Improve Reliability ⊠ Improve Coverage □ Emergency Preparedness ⊠ Transition BCSO to VHF ⊠ Interoperability			
	Other Notes: Bonner County currently has a license for the necessary VHF frequencies. This project must be completed prior to November 2012 or the license will be terminated.		

E) (	Cou	rtho	use
------	-----	------	-----

Project ID: 1E1	Budget: \$5,000	Prerequisites:	Priority: 4	
Description: Installation of telemetry equipment that allows technical staff to monitor conditions at the site. Will also alert said staff of urgent events (i.e. Power failure, intrusion, etc.). Provides the ability to remotely control some functions (i.e. switching to a backup radio, rebooting, etc.).				
Budget Items: Te	Budget Items: Telemetry equipment, installation.			
Major Goals: ⊠ Improve Reliability □ Improve Coverage □ Emergency Preparedness □ Transition BCSO to VHF □ Interoperability				
Other Notes:				

## F) Administrative Building

Project ID: 1F1	Budget: \$5,000	Prerequisites:	Priority: 4	
Description: Installation of telemetry equipment that allows technical staff to monitor conditions at the site. Will also alert said staff of urgent events (i.e. Power failure, intrusion, etc.). Provides the ability to remotely control some functions (i.e. switching to a backup radio, rebooting, etc.).				
Budget Items: Telemetry equipment, installation.				
Major Goals: ☑ Improve Reliability ☐ Improve Coverage ☐ Emergency Preparedness ☐ Transition BCSO to VHF ☐ Interoperability				
Other Notes:				

## G) Priest River

Project ID: 1G1	Budget: \$5,000	Prerequisites:	Priority: 4	
Description: Installation of telemetry equipment that allows technical staff to monitor conditions at the site. Will also alert said staff of urgent events (i.e. Power failure, intrusion, etc.). Provides the ability to remotely control some functions (i.e. switching to a backup radio, rebooting, etc.).				
Budget Items: Te	Budget Items: Telemetry equipment, installation.			
Major Goals: ⊠ Improve Reliability □ Improve Coverage □ Emergency Preparedness □ Transition BCSO to VHF □ Interoperability				
Other Notes:				

## H) Clark Fork

Project ID: 1H1	Budget: \$5,000	Prerequisites:	Priority: 4	
Description: Installation of telemetry equipment that allows technical staff to monitor conditions at the site. Will also alert said staff of urgent events (i.e. Power failure, intrusion, etc.). Provides the ability to remotely control some functions (i.e. switching to a backup radio, rebooting, etc.).				
Budget Items: Te	Budget Items: Telemetry equipment, installation.			
Major Goals: ⊠ Improve Reliability □ Improve Coverage □ Emergency Preparedness □ Transition BCSO to VHF □ Interoperability				
Other Notes:				

## I) Samuels

Project ID: 111	Budget: \$5,000	Prerequisites:	Priority: 4
Description: Installation of telemetry equipment that allows technical staff to monitor conditions at the site. Will also alert said staff of urgent events (i.e. Power failure, intrusion, etc.). Provides the ability to remotely control some functions (i.e. switching to a backup radio, rebooting, etc.).			
Budget Items: Telemetry equipment, installation.			
Major Goals: ⊠ Improve Reliability □ Improve Coverage □ Emergency Preparedness □ Transition BCSO to VHF □ Interoperability			
Other Notes:			

## J) Sundance

None.

## K) CCBFD

Project ID: 1K1	Budget: \$2,500	Prerequisites:	Priority: 3		
Description: Installation of UHF base station at Coolin Fire. This allows use of the UHF repeater on Sundance by dispatch for communication with law enforcement.					
Budget Items: A	ntenna system, installa	ation.			
Major Goals: □ II□ Transition BC	mprove Reliabilitv SO to VHF □ Inter	Improve Coverage ☐ Emergency   operability	Preparedness		
Other Notes:					
Project ID: 1K2	Budget: \$1,000	Prerequisites:	Priority: 4		
Description: Installation of telemetry equipment that allows technical staff to monitor conditions at the site. Will also alert said staff of urgent events (i.e. Power failure, intrusion, etc.). Provides the ability to remotely control some functions (i.e. switching to a backup radio, rebooting, etc.).					
Budget Items: Installation of existing equipment.					
Major Goals: ⊠ Improve Reliability □ Improve Coverage □ Emergency Preparedness □ Transition BCSO to VHF □ Interoperability					
Other Notes:					

### L) Little Blacktail

Other Notes:

•			
Project ID: 1L1	Budget: \$5,000	Prerequisites:	Priority: 4
the site. Will also	alert said staff of urg	equipment that allows technical staff to move ent events (i.e. Power failure, intrusion, et ons (i.e. switching to a backup radio, rebook	cc.). Provides the
Budget Items: Te	elemetry equipment, in	nstallation.	
Major Goals: ⊠ II  ☐ Transition BC	mprove Reliabilitv SO to VHF □ Inter	☐ Improve Coverage ☐ Emergency roperability	Preparedness
Other Notes:			
Project ID: 1L2	Budget: \$40,000	Prerequisites:	Priority: 4
portables operatin Enforcement Disp	g in the Garfield Bay batch Network (based gnals to the Little Bla	at an appropriate location to better receive area on the EMS / Fire Dispatch Network upon current performance and historical ocktail site and vote them there sending the	and Law call volume).
Budget Items: V	HF and UHF receiver	rs, radio links, voters, installation.	
Major Goals: ⊠ II  ☐ Transition BC	mprove Reliability SO to VHF □ Inter	☐ Improve Coverage ☐ Emergency roperability	Preparedness
Other Notes:			
M) Mobiles &	I	D	Dui a vita u A
Project ID: 1M1		Prerequisites:	Priority: 4
radios into packag shipping containe and interoperabili	ges of six, each with p r. Preprogram all radi	g the UHF portable radios removed from to programming cable and software in a weath ios to a standardized list that allows use on local portable repeater systems. Each	her resistant n common channels
Budget Items: Pedocumentation.	elican cases, AA batte	ry packs, NiMH battery packs, programm	ing cables,
Major Goals: □ I	mprove Reliability	☐ Improve Coverage ☐ Emergency	Preparedness

## 2. Transition of BCSO to VHF

# A) 911

Project ID: 2A1	Budget: \$28,000	Prerequisites:	Priority: 4		
Description: Installation of additional Raytheon SNV-12 devices for the Law Enforcement Secondary Network.					
Budget Items: Receiver voters with site cards					
Major Goals: ☐ Improve Reliability ☐ Improve Coverage ☐ Emergency Preparedness ☐ Transition BCSO to VHF ☒ Interoperability					
Other Notes:					

## B) Baldy

Project ID: 2B1	Budget: \$75,000	Prerequisites:	Priority: 4	
Description: This site has VHF & UHF equipment on the EMS / Fire Dispatch Network and UHF & VHF equipment on the Law Enforcement Dispatch Network and UHF only on the Law Enforcement Secondary Network. This project will add VHF on the Law Enforcement Secondary Network.				
Budget Items: VHF repeater systems with antenna systems and filter network. Design and engineering. Modification to facility to allow additional equipment. Installation labor.				
Major Goals: ☐ Ir ☑ Transition BCS	mprove Reliabilitv SO to VHF ⊠ Inter	☐ Improve Coverage ☐ Emergency I operability	Preparedness	
Other Notes:				

### C) Schweitzer

Project ID: 2C1	Budget: \$100,000	Prerequisites:	Priority: 4	
Description: This site has VHF equipment on the EMS / Fire Dispatch Network and UHF equipment on the Law Enforcement Dispatch Network. This project will add VHF on the Law Enforcement Dispatch Network as well as for a Law Enforcement Secondary Network.				
Budget Items: VHF repeater systems with antenna systems and filter network. Design and engineering. Modification to facility to allow additional equipment. Installation labor.				
Major Goals: ☐ Ir ☑ Transition BCS	mprove Reliabilitv SO to VHF ⊠Inter	☐ Improve Coverage ☐ Emergency I operability	Preparedness	
Other Notes:				

## D) Hoodoo

Project ID: 2D1	Budget: \$130,000	Prerequisites:		Priority: 4
Description: This site has VHF equipment on the EMS / Fire Dispatch Network and UHF equipment on the Law Enforcement Dispatch Network. This project will add VHF on the Law Enforcement Dispatch Network as well as for a Law Enforcement Secondary Network.				
Budget Items: VHF repeater systems with antenna systems and filter network. Design and engineering. Modification to facility to allow additional equipment. Installation labor.				
Major Goals: ☐ II ☑ Transition BCS	mprove Reliabilitv SO to VHF ⊠ Inter	☐ Improve Coverage operability	□ Emergency	Preparedness

### E) Courthouse

Project ID: 2E1	Budget: \$50,000	Prerequisites:	Priority: 4	
Description: This site has VHF equipment on the EMS / Fire Dispatch Network and UHF equipment on the Law Enforcement Dispatch Network. This project will add VHF on the Law Enforcement Dispatch Network as well as for a Law Enforcement Secondary Network.				
Budget Items: VHF repeater systems with antenna systems and filter network. Design and engineering. Installation labor.				
Major Goals: ☐ Ir ☑ Transition BCS	nprove Reliabilitv SO to VHF ⊠ Inter	□ Improve Coverage □ Emergency I operability	Preparedness	
Other Notes:				

# F) Administrative Building

Project ID: 2F1	Budget: \$10,000	Prerequisites:	Priority: 4		
Description: This site has VHF equipment on the EMS / Fire Dispatch Network and UHF equipment on the Law Enforcement Dispatch Network. This project will add VHF on the Law Enforcement Dispatch Network as well as for a Law Enforcement Secondary Network for receive only.					
Budget Items: V	Budget Items: VHF receivers. Installation labor.				
Major Goals: ☐ Improve Reliability ☐ Improve Coverage ☐ Emergency Preparedness ☑ Transition BCSO to VHF ☑ Interoperability					
Other Notes:					

### G) Priest River

Project ID: 2G1	Budget: \$100,000	Prerequisites:	Priority: 4	
Description: This site has VHF equipment on the EMS / Fire Dispatch Network and UHF equipment on the Law Enforcement Dispatch Network. This project will add VHF on the Law Enforcement Dispatch Network as well as for a Law Enforcement Secondary Network.				
Budget Items: VHF repeater systems with antenna systems and filter network. Design and engineering. Modification to facility to allow additional equipment. Installation labor.				
Major Goals: ☐ II ☑ Transition BCS	mprove Reliabilitv SO to VHF ⊠ Inter	☐ Improve Coverage ☐ Emergency I operability	Preparedness	
Other Notes:				

### H) Clark Fork

Project ID: 2H1	Budget: \$100,000	Prerequisites:	Priority: 4	
Description: This site has VHF equipment on the EMS / Fire Dispatch Network and UHF equipment on the Law Enforcement Dispatch Network. This project will add VHF on the Law Enforcement Dispatch Network as well as for a Law Enforcement Secondary Network.				
Budget Items: VHF repeater systems with antenna systems and filter network. Design and engineering. Modification to facility to allow additional equipment. Installation labor.				
Major Goals: ☐ Ir ☑ Transition BCS	mprove Reliabilitv SO to VHF ⊠ Inter	☐ Improve Coverage ☐ Emergency Foperability	Preparedness	
Other Notes:				

### I) Samuels

Project ID: 2I1	Budget: \$100,000	Prerequisites:	Priority: 4	
Description: This site has VHF equipment on the EMS / Fire Dispatch Network and UHF equipment on the Law Enforcement Dispatch Network. This project will add VHF on the Law Enforcement Dispatch Network as well as for a Law Enforcement Secondary Network.				
Budget Items: VHF repeater systems with antenna systems and filter network. Design and engineering. Modification to facility to allow additional equipment. Installation labor.				
Major Goals: ☐ II ☑ Transition BCS	nprove Reliabilitv SO to VHF ⊠ Inter	☐ Improve Coverage ☐ Emergency operability	Preparedness	
Other Notes:				

## J) Sundance

Project ID: 2J1	Budget: \$135,000	Prerequisites:	Priority: 4	
Description: This site has VHF equipment for a "stand alone" EMS / Fire Dispatch channel and UHF equipment for a "stand alone" law enforcement channel. This project adds a VHF to the law enforcement channel.				
Budget Items: VHF repeater systems with antenna systems and filter network. Design and engineering. Modification to facility, including additional power and space, to allow additional equipment. Installation labor.				
Major Goals: ⊠ II ⊠ Transition BC	mprove Reliabilitv SO to VHF ⊠ Inter	☐ Improve Coverage ☒ Emergency operability	Preparedness	
Other Notes:				

# K) CCBFD

None.

### L) Little Blacktail

Project ID: 2L1	Budget: \$100,000	Prerequisites:	Priority: 4	
Description: This site has VHF equipment on the EMS / Fire Dispatch Network and UHF equipment on the Law Enforcement Dispatch Network. This project will add VHF on the Law Enforcement Dispatch Network as well as for a Law Enforcement Secondary Network.				
Budget Items: VHF repeater systems with antenna systems and filter network. Design and engineering. Modification to facility to allow additional equipment. Installation labor.				
Major Goals: ⊠ Improve Reliability ⊠ Improve Coverage ⊠ Emergency Preparedness ⊠ Transition BCSO to VHF ⊠ Interoperability				
Other Notes:				

## M) Mobiles & Portables

Project ID: 2M1	Budget: \$400,000	Prerequisites: 1D1, 2D1	Priority: 4		
Description: Purchase and installation of VHF P25 mobile radios in BCSO vehicles. Purchase and deployment of VHF P25 portable radios with accessories (speaker mic, leather holster, tactical helmet headsets for ERT, etc.)					
Budget Items: VHF P25 mobile radios, VHF P25 portable radios, speaker microphones, holsters, spare parts, antennas, installation, training, documentation.					
Major Goals: ⊠ Improve Reliability □ Improve Coverage □ Emergency Preparedness ☑ Transition BCSO to VHF ☒ Interoperability					
Other Notes:					