MAR 0 4 2009

MILITARY DIVISION, STATE OF IDAHO
IDAHO BUREAU OF HOMELAND SECURITY
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BOISE, IDAHO 83705-5004

C.L. "BUTCH" OTTER
GOVERNOR

THE ADJUTANT GENERAL
LAWRENCE F. LAFRENZ

March 4, 2009

The Honorable C. L. "Butch" Otter
Governor of the State of Idaho
Borah Building, Room 347
304 North 8th Street
Boise, Idaho

Dear Governor Otter,

The Idaho Bureau of Homeland Security submits the "Wildfire Mitigation for State Public Safety Communications Infrastructure" for your consideration as part of the American Recovery and Reinvestment Act of 2009.

This project in my estimate is "shovel ready" and protects vital public safety communications infrastructure and systems utilized by State and local units of government as well as creates significant job stimulus during the life of the contract. The cost of the project is $4,869,707.40 based on current estimates. Additionally the request does not require any additional FTPs or create any sustainment costs beyond the life of the stimulus project.

As stated above this project if approved will provide critical protection of the State of Idaho's investment in its communications infrastructure by establishing a fenced barrier and defendable space around each remote site from wildfire danger and destruction.

Thank you for your consideration.

Bill Shawver, Colonel
Director, Idaho Bureau of Homeland Security

Project Name: Idaho Public Safety Communications System Wildfire Mitigation

Project Location: This project would include 101 Idaho State Public Safety Communications System Sites dispersed throughout the state as shown on the attached map. Most locations are unmanned remote sites that are situated on mountain peaks and other locations that provide for the clear transmission of microwave and radio communications. This project would protect the state-owned communications equipment at these sites that are located on a combination of 74 state owned sites and 3 local government sites, 5 private sites and 19 locations on land owned by federal agencies where the State has entered into a collaborative agreement for use of the land.

Project Description: This project will protect state-owned communications sites from damage resulting from wildfire. The project will ensure that public safety communications are not compromised by wildfire events and protect critical infrastructure purchased with Idaho taxpayer dollars while ensuring that communications systems vital to public safety throughout the state of Idaho are not damaged or significantly impacted during wildfire emergencies. This project is specifically identified in the 2007 State of Idaho Hazard Mitigation Plan on page 101. Each of these remote communications sites is vulnerable to wildfire, and the necessary work will be prioritized based on; the importance of the site as a critical path; and local site conditions that increase the vulnerability of the equipment and operations. Multiple state agencies, local governments and federal agencies will benefit from this important work to reduce vulnerability from wildfires. No adverse impacts are foreseen to taxpayers, agencies or the environment.

The State of Idaho operates a comprehensive network of communications sites that traverses the state. These communications sites provide critical public safety communications for the Idaho State Police, Idaho Department of Lands, Idaho Transportation Department, rural emergency medical service providers, local law enforcement, and local fire agencies in addition to the multiple state agencies served by the microwave backbone system. This infrastructure also supports local agencies using trunked 700Mh radio communications by providing connectivity to the State's Master Site. The mountainous topography of the state necessitates that the communications sites be located on hills and mountain tops to achieve maximum functionality. These sites operated by the Idaho State Public Safety Communications section within the Idaho Bureau of Homeland Security provide critical public safety communications and support to multiple state agencies. This infrastructure also represents a significant investment of state funds over the past 30 years.

The tops of the hills and mountains are exceptionally vulnerable to wildfires on account of increased lightning activity, erratic wind patterns on exposed sites, vegetative fuel types containing more fine fuels which are easy to ignite, and fire behavior characteristics. These unmanned remote sites are located in areas with no water supply for firefighting operations. The sites are only accessible by steep narrow dirt roads with limited turnouts. The communications sites provide public communications, both land mobile radio systems and microwave systems, to a variety of state, federal, and local agencies. In most instances, cooperative agreements are in place with local governments, federal agencies and private sector organizations to share the location because it provides the best coverage for communications systems. The past couple wildfire seasons provided a number of close calls for these critical facilities.

The dry conditions and extreme fire conditions of the past few seasons have come close to destroying several state communications sites. The East Butte Communications site was damaged by a wildfire event in the July 0f 2007 (see attached photos). The damage to the East Butte Communications Site severely impacted communications and operations for Idaho State Police, Idaho Transportation Department, Idaho Fish and Game, Rural Emergency Medical Services dispatching, local law enforcement agencies and Idaho Public Television throughout the northeastern part of Idaho.

The loss of any of these remote communications sites and their facilities can create far reaching and serious implications. When this occurs there is a potential for a communication black-out for much of the state. Some of the more critical sites include Cold Springs Ridge, Rocky Butte, Yahoo Creek, Paps Mountain and East Butte. If serious damage were to occur on the communications sites housing the states' microwave system the entire State of Idaho communications system could be placed in jeopardy. Currently Idaho's Communications network is not configured in a loop. As a result a loss of any site in the two way line of communication will result in a loss of intra state communications in either direction that would have passed through damaged site. (See attachment "State Communications Sites and Connectivity Map.jpg"). The time to repair a severely burned microwave site will take from 4-6 weeks. The loss of a land mobile system to fire will be much quicker to replace. A backup repeater, which will provide partial service, can be temporarily installed in 72 hours and complete replacement will take a couple of weeks. The reason for the long times for restoral is that microwave radio systems are not a normally "stocked" item from manufacturers. Each microwave radio system is assembled and built upon receipt of an order. The normal time for delivery of a microwave radio from the time it is ordered is 6–8 weeks. Even with an order rushed, it still would take from 4–6 weeks to get a radio manufactured and delivered. There are also many additional components such as batteries, waveguide, rectifiers, alarm systems, channel banks, dehydrator systems and related items that would need to be assembled as well.

Scope of Work: The work required to complete this project and protect state-owned critical public safety communications facilities from damage resulting from wildfire includes a variety of actions at each facility. The work required at each location may differ slightly based on local conditions, but the following general actions will be completed at each site to accomplish the project goal:

1. Remove vegetative fuel load from the immediate proximity of each communications site to create a defensible space of 50 feet in all directions from the tower and structure housing the communications equipment.
2. Provide a base of compacted crushed rock in the defensible space to extend 50 feet in all directions from the tower and structure housing the communications equipment to provide easy maintenance of the defensible space.
3. Replace approximately 25 combustible structures that house communications equipment with fire-resistant buildings that afford protection against flames and radiant heat to the equipment housed within the structure.
4. Protect 500 gallon propane tanks that provide fuel supply for back-up generators by placing propane tanks in partially buried concrete vaults with metal lids.
5. Protect back-up generators from flames and radiant heat with concrete-block walls along sides exposed to perimeter.
6. Bury all fuel lines and fiber-optic lines in conduit to protect them from flames and radiant heat.
7. Replace combustible antenna poles with non-combustible poles.

8. Install 35kw propane powered generators and propane tanks at 9 state microwave sites without a current extended back-up power source.

Work on this project can begin as soon as the environmental review and bidding processes are complete. The environmental review should not present significant problems as the communications sites already include disturbed ground and a presence within a defined footprint. These sites already operate on either state-owned land, state leased land, or land cooperatively used for a common purpose and so rite-of-way or easement issues are not anticipated. We included a contingency of $125,000 to contract professional services to complete environmental assessments if needed. This project will take 2 years to complete because the winter season between November and April does not allow for access or work to occur while the ground is covered with snow. It may be possible to complete the work within one year depending on several variables to include; contractor availability, environmental assessments, date of funding availability and contracting process.

The Bureau of Homeland Security will employ a temporary project manager for the coordination and management of the project. This individual will assist in gathering data and coordinate environmental reviews where necessary, maintain project documentation, coordinate Memorandums of Understanding / agreements with other property owners, complete benefit cost analysis, and coordinate/ monitor contractors for completion of work. This individual will report to the State Hazard Mitigation Officer.

Funding Requirement: This project will require a one-time investment of $4,869,707. Of this amount, $150,000 is contingency funding to complete environmental assessments at the 19 locations owned federal agencies if required prior to completing the work at these locations.

In the event this proposal is funded, the Idaho Bureau of Homeland Security will complete a benefit cost analysis using FEMA's benefit cost analysis tool. Based on experience with similar mitigation projects and other mitigation projects, this project should yield a benefit to cost ratio of 2.5:1 or 3:1 annualized return over the life of the project.

Jobs: This project will create a total of 23 jobs in multiple parts of the state over a two year period. The preservation of these jobs will be short-term (2-years) as this is a one-time request that does not create an on-going obligation for the state. In the event environmental assessments are required to complete work at the locations on federally owned land this would save an additional 8-10 jobs over the 6-10 weeks anticipated to complete the necessary environmental reviews.

Created:

- This project will create 1 two-year temporary staff job to manage the project in the Idaho Bureau of Homeland Security.
- This project will create 23 private sector jobs in labor/forestry and electrical work dispersed regionally within Idaho.
- In the event that contract labor is available and capable of completing this project in a 12 month timeframe, the project would create 46 jobs over a one-year period.

When the funding for this project stops, the state will be left with critical communications sites that share a reduced vulnerability from wildfire, model wildfire mitigation projects that can be shared with local government to use as a blue print to reduce their wildfire risk and 23 workers that were able to find work during the economic downturn. The project does not create an on-going obligation for the State of Idaho. Personnel from the Idaho Public Safety Communications Unit within the Idaho Bureau of Homeland Security will provide annual maintenance as part of their routine maintenance to maintain the defensible space created in this project.

Figure 1: Flames and heat charred the structure housing sensitive communication equipment at the East Butte Communication site. Intense at this location could easily have damaged the equipment in the structure.

Figure 2: Damage to microwave dishes located at this facility.

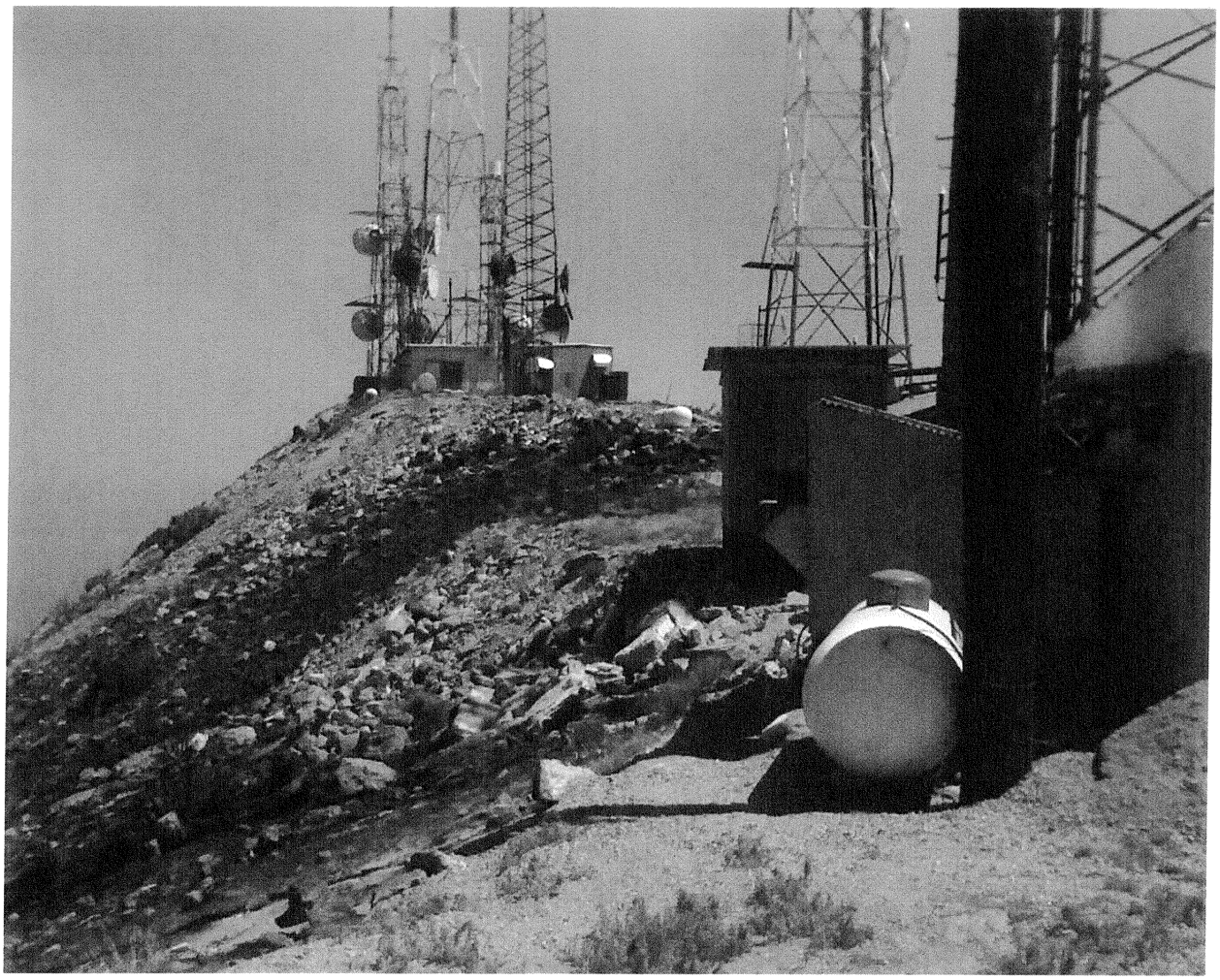

Figure 3: Radiant heat could have caused a Boiling Liquid Expanding Vapor Explosion (BLEVE) had the fire at this location burned longer or more intensely.

Public Safety Communication Sites Wildfire Mitigation Project Budget

Line Item	Quantity	U/M		Price	Total
Project Manager Salary	4160	hours	$	22.42	$93,267.20
project Manager Fringe	4160	hours	$	8.97	$37,315.20
Mechanical Fuel Reduction	190	acres	$	350.00	$66,500.00
Compacted Aggregate	10450	cubic yards	$	75.00	$783,750.00
labor to accomplish tasks	40000	hours	$	35.00	$1,400,000.00
35KW Generators	9	each	$	15,000.00	$135,000.00
Electrical Work	9	each	$	30,000.00	$270,000.00
Bury propane fuel lines	7125	linear foot	$	27.00	$192,375.00
Bury fiberoptic lines	7125	linear foot	$	27.00	$192,375.00
Concrete Vaults for Propane Tanks	40	each	$	3,500.00	$140,000.00
Fire-resistant metal buildings	25	each	$	35,000.00	$875,000.00
20x25 concrete pads for fire resistant buildings	25	each	$	3,500.00	$87,500.00
8 foot chain-link fence for unfenced sites	12475	linear foot	$	35.00	$436,625.00
Environmenatal Assessment (contingency if required)	1	lump sum	$	150,000.00	$150,000.00
Travel / Project Inspection	1	lump sum	$	10,000.00	$10,000.00
					$4,869,707.40

MICROWAVE BACKBONE AND COMMUNICATIONS FACILITIES