STATE OF CALIFORNIA CAPITAL OUTLAY BUDGET CHANGE PROPOSAL (COBCP) COVER PAGE (REV 06/15)	DEPARTMENT OF FINANCE 915 L Street Sacramento, CA 95814 IMS Mail Code: A15

BUDGET YEAR 2016-17

BUSINESS UNIT: 3540 COBCP NO: 2 PRIORITY: 3 PROJECT ID: 0000920

DEPARTMENT: Department of Forestry and Fire Protection

PROJECT TITLE: Statewide: Replace Communications Facilities, Phase V

TOTAL REQUEST (DOLLARS IN THOUSANDS): $1,677 MAJOR/MINOR: Major

PHASE(S) TO BE FUNDED: P PROJ CAT: CRI CCCI/EPI: 6062

SUMMARY OF PROPOSAL:

The proposal is for preliminary plans funding to replace existing telecommunications infrastructure at six communications sites with new telecommunications towers, vaults and other supporting infrastructure as required and add an additional tower at a seventh site. New facilities are built to meet essential services seismic standards, withstand 100 mph winds and have 25-year serviceable life spans. Towers are self-supporting, 4-legged lattice structures with upper monopoles and with safety ladders, platforms and lightning arrestors. Radio equipment vaults are concrete construction. The scope of work includes installation of new emergency backup generators, fuel systems, multi-purpose alarms, heating, venting and cooling systems and VHF and microwave communication equipment complete with all necessary accessories. Site work includes demolition of existing structures, extension of utilities, road and site paving and security fencing as site needs dictate.

HAS A BUDGET PACKAGE BEEN COMPLETED? (Existing, Needed, Not Needed?): Existing

REQUIRES LEGISLATION (Y/N): N IF YES, LIST CODE SECTIONS: _____

REQUIRES PROVISIONAL LANGUAGE (Y/N) N

IMPACT ON SUPPORT BUDGET: ONE-TIME COSTS (Y/N): N FUTURE COSTS (Y/N): N

FUTURE SAVINGS (Y/N): N REVENUE (Y/N): N

DOES THE PROPOSAL AFFECT ANOTHER DEPARTMENT (Y/N): N IF YES, ATTACH COMMENTS OF AFFECTED DEPARTMENT SIGNED BY ITS DIRECTOR OR DESIGNEE.

SIGNATURE APPROVALS:

Steven T Reader 12-30-2015
PREPARED BY DATE

[signature] 1/8/16
REVIEWED BY DATE

[signature] 1/7/16
DEPARTMENT DIRECTOR DATE

[signature] 1/7/16
AGENCY SECRETARY DATE

****

DOF ANALYST USE

DOF ISSUE #: PROGRAM CAT:____ PROJECT CAT:_____ BUDG PACK STATUS:____
ADDED REVIEW: SUPPORT:___ OCIO:____ FSCU/ITCU:____ OSAE:___ CALSTARS: ____

PPBA: Original Signed by: Stephen Benson DATE SUBMITTED TO LEGISLATURE: 1/7/16

BUSINESS UNIT: 3540 COBCP NO: 2 PRIORITY: 3 PROJECT ID: 0000920

A. PURPOSE OF THE PROJECT

This project proposes to replace six Department of Forestry and Fire Protection (CAL FIRE) communications facilities and add an additional tower at a seventh existing site to comply with the legislatively mandated plan for the California Technology Agency's Public Safety Communications Office (PSCO) to convert all telecommunications sites in the state's Public Safety Microwave Network (PSMN) to digital technology.

Background/history

CAL FIRE's Mountaintop Facility Component of statewide Telecommunications Safety Network: CAL FIRE operates and manages communications equipment at 192 telecommunications sites throughout the state. CAL FIRE mountaintop communications facilities are remote facilities that essentially consist of a telecommunications tower and a securable radio communications building (vault) that is environmentally controlled to house sensitive radio transmission equipment. These facilities also include back-up electric generators that enable the sites to remain operational during power outages. Depending on site limitations, these generators are housed either within the vault, in a separate room, or in a stand-alone securable building. Where electrical power is not available at the site, facilities are powered by diesel/propane generators or solar panels for primary power.

CAL FIRE is a member of the Public Safety Radio Strategic Planning Committee established by the Legislature in December 1994. The committee has primary responsibility in state government for developing and implementing a statewide integrated public safety communication system that facilitates interoperability among state agencies and coordinates other shared uses of the public safety spectrum consistent with decisions and regulations of the Federal Communications Commission.

CAL FIRE's telecommunications sites provide the essential emergency communications linkage for CAL FIRE's fire protection and emergency response command and control throughout the state. In addition, these facilities are essential components of California's PSMN that transmits 911 calls and emergency instructions during major public safety incidents, including floods, firestorms and other natural disasters. Many of the CAL FIRE-managed mountaintop sites are also utilized and relied upon by other public safety agencies for their telecommunications needs, including:

- California Technology Agency's Public Safety Communications Office (PSCO)
- California Highway Patrol (CHP)
- California Emergency Management Agency (CALEMA), Homeland Security
- Federal Emergency Management Agency (FEMA)
- Federal Bureau of Investigations (FBI)
- Bureau of Alcohol, Tobacco and Firearms (ATF)
- Department of Water Resources (DWR)
- Department of Transportation/Caltrans (DOT)
- Department of Parks and Recreation (DPR)
- Water Agencies
- Federal Air Guard

- Local County Agencies
- US Forest Service

These agencies rely upon CAL FIRE-managed sites for their exclusive radio transmission coverage at expansive and/or heavily populated areas of the state. Given the post-September 11th environment of heightened statewide security alert and incident response, it is more critical than ever to ensure the reliability and functionality of communications facilities.

The PSCO was established in 1947 with the Mission to ensure that quality telecommunications services and commodities are provided to all state agencies in the most cost-effective, efficient and timely manner possible. This includes maximizing the use of state resources and the consolidation and joint use of telecommunications systems and services where operationally, technically and economically feasible. PSCO is responsible for assessing the overall long-range telecommunications needs and requirements of the state, considering both routine and emergency operations, performance, cost, state-of-the-art technology, multi-user availability, security, reliability and such other factors deemed to be important to state needs and requirements.

Telecommunications Digital Technology Conversion Plan: The Legislative Analyst's Office (LAO) prepared an analysis of the 1995-96 Budget Bill for their Report to the Joint Legislative Budget Committee that required a plan to convert all telecommunications sites in the PSMN to digital technology. In the analysis, the LAO stated that "conversion is required to meet customer's needs." The conversion of the PSMN to digital technology will support new agency needs and provide better reliability with higher quality circuits.

Because CAL FIRE operates and manages the majority of state owned communications facilities in the state, CAL FIRE developed a Tower and Vault Master Plan (T&V Plan) dated December 18, 1995, which was adopted as part of the conversion plan. The T&V Plan was last updated March 22, 1998. The T&V Plan was developed to ensure continued reliability of the towers and vaults, which serve as critical structures in the department's public safety radio system and it also enables compatibility with the requirements of the PSMN. Public safety radio systems serve as critical links for fire and other public safety personnel throughout the state serving to protect the lives and property of the citizens of California.

CAL FIRE T&V Plan: Six facility replacements and the addition of a tower at an existing facility proposed by this COBCP represent the Phase V highest priority projects identified in the 1998 update to the T&V Plan:

1. Chalk Mountain Communications Facility – Replace Facility
2. Sierra Vista Communications Facility – Replace Facility
3. Mount Oso Communications Facility – Replace Facility
4. Bunchgrass Communications Facility – Replace Facility
5. Mount Pierce Communications Facility – Replace Facility
6. Pratt Mountain Communications Facility – Replace Facility
7. Banner Mountain Communications Facility – Construct Additional Tower

The T&V Plan identified a total of 105 CAL FIRE tower and vault sites in need of renovation or replacement. 35 sites were replaced, renovated or approved for replacement as of August 2014.

Problem

The Legislatively mandated statewide conversion of all telecommunications sites to digital technology cannot be accomplished at Chalk Mountain, Sierra Vista, Mount Oso, Bunchgrass, Mount Pierce, and Pratt Mountain Communications Facilities until the deteriorated, obsolete, and unsound infrastructure is replaced and an additional tower is constructed at the Banner Mountain communication site.

Condition of facilities: The six communications sites being replaced, noted above, were erected in the mid 1940's and have reached the end of their functional life. The vaults at each of these locations are too small to accommodate the number of users and/or modern equipment for the new digital microwave technology and the current code required clearances. Additionally, those constructed of metal do not meet the exacting climate control requirements of newer technology telecommunications equipment. All the vaults proposed for replacement are at risk of failure due to the age of the buildings and the extreme weather conditions they are subjected to on the mountain tops.

The primary weighted priority consideration for telecommunications site replacement is a facility's location on the state's microwave backbone path that links multiple facilities. Bunchgrass Communications Facility is critical to the Truckee-Lassen backbone route, with microwave paths running from Bunchgrass to Redding, Big Valley Mountain and Burney. Mount Pierce and Pratt Mountain are also existing backbone sites for the microwave network; however, due to lack of site capability, PSCO has been unable to complete the conversion to digital technology on the "North Coast" route. Replacement of Mount Pierce and Pratt Mountain Communications Facilities will enable the digital conversion to continue.

Mount Oso is a stub path from Stockton and will become a backbone site once the facility replacement is complete, providing microwave paths from Mount Oso to Farmington, Pacheco Pass and Tracy CHP.

Currently, PSCO does not have microwave service into Sierra Vista and Chalk Mountain due to the present condition of the facilities. CHP, DPR and other site users have requested microwave connectivity; upgrading these sites will enable PSCO to meet these agency's needs.

The existing tower at Banner Mountain is fully loaded, precluding expansion of paths out of that site. An additional tower will allow network expansion to proceed.

Other prioritization criteria utilized in the T&V Plan included age and obsolescence, pole construction, height, expansion potential and compliance with safety/OSHA/environmental requirements. The six facilities proposed for replacement in this COBCP have the following elements that resulted in their prioritization for Phase V of the T&V Plan:

> *Inadequate Towers:* The obsolete CAL FIRE towers cannot support current digital microwave technology required for the state's digital microwave conversion project along the state's microwave backbone path. The towers at these sites do not meet minimum requirements for height and structural integrity. The minimum requirements are based on a microwave system that requires two dishes, vertically separated by approximately 40' for every microwave path. The original towers were built for single point-to-point antenna systems. This new requirement adds at least 40' of height to every existing old style tower and that extended height also adds to the need for more structural integrity and strength in the towers. Because the microwave system is a point to point radio system, structural rigidity is needed in the tower. If the tower moves too much in the wind or snow/ice loading, the radio path is lost, resulting in broken communications on those circuits until the tower moves back into position or the dish is realigned manually.

Vaults: The vaults at the six replacement sites are too small to accommodate the number of users and the new digital microwave technology. Additionally, those constructed of metal do not meet the climate control requirements of newer technology telecommunications equipment. All the vaults proposed for replacement are at risk of failure due to the age of the buildings and the extreme weather conditions they are subjected to on the mountain tops.

Marginal Equipment: The age and accumulated wear on environmental control equipment and back-up generators and their supporting fuel systems render the telecommunications equipment susceptible to failure at any time. Environmental control equipment, installed in the vault to filter dust, mitigate moisture and control the climate inside the vault, has exceeded its life and has a significant failure risk associated with continued use without replacement.

Undersized fuel systems: Generator fuel systems at the six replacement sites are undersized, providing for only a few days of generator operation. Conversely, most mountaintop sites are inaccessible for refueling for weeks at a time during winter months. In recent years, during extended winter power outages or utility connections failures at certain sites, expensive helicopter resupply of propane and diesel fuel have been necessary to keep the generators running and the sites operational.

Potential Impact of Telecommunications Failure: The microwave network carries important mission-critical public safety communications traffic for CAL FIRE and the other state, local, federal and private agencies previously listed on page 3 of this document. Operational failures at key telecommunications facilities may result in disastrous consequences by interrupting critical communications. The negative impacts of such disruption in emergency communications may be felt across large areas of the state and potentially statewide.

An example of the consequences of operational failure at a telecommunications facility is the Berryessa facility in Yolo County, which was engulfed by fire in November 2004, destroying the fire incident main command radio. CAL FIRE communications traffic was redirected to another radio site; however, this left a portion of the firefighting efforts without radio coverage on the Command Net, where each radio site covers a geographical area. The next closest repeater site did not cover that area because there is some overlap in radio coverage from mountain top site to mountain top site; radio waves only work on a line-of-sight basis (a repeater is an electronic device that receives a signal and retransmits it at a higher level and/or higher power or onto the other side of an obstruction so that the signal can cover longer distances). If there are any obstructions between the mountain top repeater and the ground radio units there is minimal or zero radio coverage. This means the mobile radios cannot hear or communicate to or from the mountain top sites that are not in their line-of-sight.

Another example of the consequences of operational failure at a telecommunications facility is the Bunchgrass facility in Shasta County, where in February 1996 all emergency radio communications were blacked-out throughout a 100-mile corridor along Highway 299 due to collapse of the CAL FIRE tower. The facility was blacked-out for two weeks until a temporary emergency tower could be erected. The "temporary" tower is still in use as of August 2014.

Attaining the Department's Mission is highly dependent on maintaining a continuous state of readiness to respond to emergencies and rapid and well-coordinated deployment of diverse, decentralized emergency response resources. For example, a key objective in the Board of Forestry and Fire Protection's California Fire Plan is limiting 95% of all wildfires to 10 acres or less. This requires rapid response, including the ability to achieve reliable, instantaneous communication throughout the State Responsibility Area (SRA). Achieving this objective yields big rewards in terms of life, property and resources preservation. To this end, the state

spends hundreds of millions of dollars annually for staff and equipment to maintain its high state of readiness to rapidly respond to wildfire and numerous other types of emergencies.

For these reasons, the Department seeks to continue replacement of inadequate and unsound communications facilities to reduce the risk of catastrophe as a direct result of communications failure.

Chalk Mountain

Although the Chalk Mountain site is small, it serves a large portion of the coast for the San Mateo/Santa Cruz Unit and it is the only site that covers that area. The Chalk Mountain site was the only site that provided radio coverage for the 2007 Martin Fire that threatened the old growth redwoods. Failure at this site would completely shut down radio communications along the coast where many traffic accidents and medical aides are reported. CHP and DPR have requested installation at the site but the site cannot support their requests in its current condition.

Sierra Vista

The Sierra Vista site, located in Calaveras County, serves the greater central portion of the county for radio coverage not only for CAL FIRE but also for the CHP, DOT and the Calaveras County Sheriff's Office. CAL FIRE depends on this site for coverage of the main dispatch net for CAL FIRE and the 13 Calaveras County Fire Districts who contract with CALFIRE for their fire dispatching needs. Without this site there would be no alerts received on the radio pagers for Mokelumne Hill Fire Station, Central Calaveras Fire District and the San Andreas Fire District. There is no other site that overlaps this site for radio coverage. In the event of a failure, a portable repeater could be placed at the site but that requires several hours to accomplish and it would be low power and have coverage issues. Over 1/3 of the population of Calaveras County would be without radio coverage for both fire dispatching and law enforcement dispatching provided by the Calaveras County Sheriff's Office. The Sierra Vista Communications Facility is in the PSCO Plan for microwave installation as soon as the site is upgraded. The current vault and tower are not adequate to support the state Microwave System; requests by CHP, CAL FIRE and other users for microwave service at the site are waiting to be installed when the site is upgraded.

Mount Oso

The Mount Oso site, located in Western Stanislaus County, is the only site the serves the SRA from Merced County north to Tracy in San Joaquin County and all the area west of Interstate 5. Without this site's repeater there would be *no* coverage for this vast area. The Santa Clara Unit depends on this site for all their main dispatch channel needs as well as their Command Net. The entire I-5 corridor depends on this site, as well as all the smaller cities along I-5 in Stanislaus and San Joaquin Counties. In fact, CAL FIRE uses this site frequently to cover areas across the Valley into the Sierra Nevada Foothills. During a recent drill in Amador County, the Command 2 Repeater at Mount Oso was the only accessible repeater.

Mount Oso is a prominent site and very important to CAL FIRE, CHP and others for communications. Every summer large fires in excess of 5,000 acres occur multiple times in this area and this is the only site available for coverage; there are no other sites that overlap this area. Loss of this site cripples multiple sites because Mount Oso is the control point for CAL FIRE repeaters in the Santa Clara Unit. PSCO plans to make Mount Oso a microwave backbone site as soon as the site is upgraded. They will then make Oso a hub that serves Farmington, Pacheco Pass and the Tracy CHP office.

Bunchgrass

Bunchgrass is located in Shasta County. Failure of the Bunchgrass site will result in the loss of radio coverage in the northern section of Shasta County and the Highway 299 corridor. Bunchgrass is on the state Microwave Backbone and is the only link for DOT to their Burney facility. The site is critical for the Truckee-Lassen Backbone route as it is the only redundant path to the backside of the Sierra Mountains via the Big Valley site. CAL FIRE responds to a high volume of traffic accidents and medical aides in this area.

The Bunchgrass site is also the main Wildland Fire Communications Radio Repeater for the northeast section of the Shasta Unit. The Big Bend, Hillcrest and Burney Fire Stations are dispatched via this site from the Emergency Command Center and these stations would be unable to respond to emergency 911 calls until an alternate communications site could be established.

Mount Pierce

Mount Pierce, located in Humboldt County, is the North Coast Backbone site, the only microwave path to CAL FIRE's Fortuna Command Center. Failure of Mount Pierce would cripple the intercom system, green phone lines and control of multiple radio sites from the Fortuna Command Center. The Public Safety Microwave Backbone and the radio system cannot be upgraded until the existing facility is replaced. Mount Pierce also houses the main Humboldt Unit Repeater; failure would result in loss of radio coverage to dispatch five fire stations, one inmate camp, the Rohnerville Air Attack Base and the Kneeland Helitack Base. These facilities respond to over 4,400 incidents annually, including medical aides, structure fires, traffic accidents, hazardous materials spills and vegetation fires. Over 100 square miles would be without radio coverage by multiple agencies including law enforcement and 80,000 residents would be in danger of delayed response by emergency personnel.

Pratt Mountain

Pratt Mountain is located in Humboldt County. Failure of the Pratt Mountain site would impair the Microwave backbone up the North coast and would eliminate CAL FIRE's ability to communicate on the Humboldt-Del Norte Unit Local Net to dispatch three fire stations and one inmate camp. These facilities respond to an average of 645 incidents annually including medical aides, structure fires, traffic accidents, hazardous materials spills and vegetation fires. Over fifty square miles at the southern end of the Unit would lose radio coverage by multiple agencies including law enforcement and 25,000 residents would suffer delayed emergency response by emergency personnel.

Banner Mountain

Banner Mountain is located in Nevada County. The existing tower at Banner Mountain is fully loaded, precluding any further expansion of the paths out of that site for the state Microwave System. Banner Mountain's prime location for public safety radio has overloaded the existing tower to the extent that if any more dishes or antennas are added the tower could fail. To implement the planned conversion expansion, another tower is required to complement the existing tower.

Replacement Facility Planning & Construction: DGS, in conjunction with CAL FIRE, has developed highly functional prototypical tower, vault and generator building designs and cost-efficient construction regimens that will be utilized for Phase V, as well as future phases of tower and vault replacements.

B. RELATIONSHIP TO THE STRATEGIC PLAN

This project relates to the following goals in the California Department of Forestry and Fire Protection 2012 Strategic Plan:

Goal: Seek to improve operational efficiency and effectiveness by shaping, enhancing, and adapting to changing circumstances.

Objective: Develop and implement a strategy to reduce CAL FIRE's $2.4 billion Capital Outlay replacement backlog of facilities that have an average age in excess of 45 years by 40% by 2022.

To meet this objective:

- CAL FIRE's Technical Services Unit continues to coordinate facility tours to educate the decision makers in the Legislature, Administration, and Legislative Analyst's Office on the Department's infrastructure program.
- CAL FIRE's Capital Outlay Command (CAPCOM) and the Technical Services Unit continue to pursue more efficient project delivery methods and alternative funding strategies.

C. ALTERNATIVES

Fund preliminary plans to replace six communications facilities and construct an additional tower at Banner Mountain	Advantages: • Replacement of inadequate and unsound communications facilities reduces the risk of catastrophe as a direct result of communications failure. • This alternative will bring these critical facilities into full compliance with the code and service level requirements for an essential services facility. • This project provides the essential emergency communications linkage for CAL FIRE's fire protection and emergency response command and control throughout the state. Disadvantages: This alternative has no disadvantages.
Defer this project	Advantages: This alternative has no advantages. Disadvantages: • Delaying this project results in a high probability of catastrophic failure of critical telecommunications sites. • This alternative does not correct, in a timely manner, the deficiencies at the existing facilities that impede CAL FIRE's ability to provide critical telecommunications capabilities. The obsolete CAL FIRE towers cannot support current digital microwave technology required for the state's digital microwave conversion project along the state's microwave

backbone path.

- There is an increased likelihood that the project cost will be higher when undertaken in the future.

D. RECOMMENDED SOLUTION

1. WHICH ALTERNATIVE AND WHY:

The recommended solution is Alternative #1, fund preliminary plans to replace communications facilities at Chalk Mountain, Sierra Vista, Mount Oso, Bunchgrass, Mount Pierce and Pratt Mountain and to construct an additional tower at Banner Mountain. This project continues a replacement program that has completed or has approved 35 telecom site replacements or renovations as part of the T&V Plan.

2. DETAILED SCOPE DESCRIPTION:

Prototypical structures for mountain top communications facilities are developed based on the unique requirements for telecommunications equipment, remote mountainous locations and the associated extreme mountain top weather conditions. All structures must be able to resist 100 mph winds and seismic activity. Towers must have ladders and platforms that properly safeguard personnel required to install, repair and maintain the equipment. They must also conform to standards that prevent interference of VHF and microwave transmissions. For microwave systems, this requires rigid support of dish antennas to prevent disruption of signals; towers must be able to resist swaying due to high winds. The vaults must provide year-round temperature and moisture control for the sensitive electronic digital equipment to prevent equipment failure.

To achieve the above performance criteria, new construction will include the following:

- Emergency power generator with a reliable fuel supply for at least one week of continuous operation. An alarm system is also required to ensure rapid response in the event of a break-in, fuel shortage, or power failure.
- Self-supporting 4-legged towers of lower lattice/upper monopole design, with safety ladders, platforms and lightning arrestors.
- Concrete masonry unit (CMU) or precast concrete radio equipment vaults with new automatic interior climate control system sized to meet maximum installed equipment needs, interior space and local weather conditions. Vaults to be one of three prototypical design sizes based on current and future (25 years) equipment and space needs.
- New emergency backup generators, CMU or precast concrete generator buildings and fuel systems including propane fuel tanks and fuel lines that provide 25-year serviceable lifespan.
- Multipurpose alarms installed in vaults and generator buildings and on fuel systems.
- VHF and Microwave communication equipment complete with all necessary conduit and other supporting accessories.
- Site work to include utilities, paving and demolition of all structures to be replaced. Security fencing to be installed as determined necessary, based on site conditions.

3. BASIS FOR COST INFORMATION:

   Design and construction costs are extrapolated from the DGS 3-page estimate for statewide: Replace Communications Facilities, Phase V, prepared in December 2006, escalated from CCCI 5959 to CCCI 6062.

4. FACTORS/BENEFITS FOR RECOMMENDED OTHER THAN THE LEAST EXPENSIVE ALTERNATIVE:

   Failure to implement the improvements outlined in this submittal will impact the operation of these mission-critical facilities including an increased probability of catastrophic failure of critical telecommunications sites across large areas of the state.

5. COMPLETE DESCRIPTION OF IMPACT ON SUPPORT BUDGET:

   Maintenance and repair costs for the new facilities will initially be lower following completion of the project and during the early portion of their serviceable lifespan.

6. IDENTIFY AND EXPLAIN ANY PROJECT RISKS:

   There are no risks associated with completion of this project.

7. LIST REQUIRED INTERDEPARTMENTAL COORDINATION AND/OR SPECIAL PROJECT APPROVAL (INCLUDING MANDATORY REVIEWS AND APPROVALS, E.G. TECHNOLOGY PROPOSALS):

   This project will require for each site: CEQA compliant environmental review, approval by the State Fire Marshal, Division of the State Architect and completion of real estate due diligence. Facilities to be constructed on leased property may require lease revisions to secure sufficient long term property rights.

E. CONSISTENCY WITH CHAPTER 1016, STATUTES OF 2002 – AB 857:

1. Does the recommended solution (project) promote infill development by rehabilitating existing infrastructure and how?

   Yes, the recommended solution replaces infrastructure at existing sites.

2. Does the project improve the protection of environmental and agricultural resources by protecting and preserving the state's most valuable natural resources?

   Due to the nature of the Department's mission, it can be necessary to locate facilities into areas that could have negative environmental and agricultural impacts; however, strategic placement of these facilities to provide more effective response to wild land fires will ultimately protect nearby forests, watersheds, agricultural land, and other valuable natural resources.

3. Does the project encourage efficient development patterns by ensuring that infrastructure associated with development, other than infill, support efficient use of land and is appropriately planned for growth?

   Project planning includes incorporation within local government planning models. Growth-inducement potential is one of the potential environmental impacts addressed in the CEQA process.

   Attachments

1. Project Cost Estimate
2. Fiscal Impact Worksheet

DEPARTMENT OF FORESTRY AND FIRE PROTECTION
CAL FIRE - TECHNICAL SERVICES
ONE-PAGE ESTIMATE

PROJECT:	Replace Communications Facilities, Phase V	CAL FIRE EST. #:	16/17 MA4
LOCATION:	Statewide	EST. / PROJ. CCCI:	5959
DESIGNED BY:	SHQ	ESTIMATE DATE:	8/6/2014
MANAGED BY:	SHQ	EST. PREPARED BY:	SR/SHQ
PROJECT DIRECTOR:	TBD	DOF PROJ. ID NO.:	30.60.042

DESCRIPTION

The proposal is for preliminary plans to replace existing telecommunications infrastructure at seven communications facilities with new telecommunications towers, vaults and other supporting infrastructure as required. New facilities are built to meet essential services seismic standards, withstand 100 mph winds and have 25-year serviceable life spans. Towers are self-supporting, 4-legged lattice structures with upper monopoles and with safety ladders, platforms and lightning arrestors. Radio equipment vaults are concrete construction. The scope of work includes installation of new emergency backup generators, fuel systems, multi-purpose alarms, heating, venting and cooling systems and VHF and microwave communication equipment complete with all necessary accessories. Site work includes demolition of replaced structures, extension of utilities, road and site paving and security fencing as site needs dictate.

ESTIMATE SUMMARY

DIRECT COST

Site Work		$1,005,000
Chalk Mountain	1 LS	$1,735,000
Sierra Vista	1 LS	$1,735,000
Mount Oso	1 LS	$1,735,000
Bunchgrass	1 LS	$1,735,000
Mount Pierce	1 LS	$1,735,000
Pratt Mountain	1 LS	$1,735,000
Banner Mountain (Tower only)	1 LS	$670,000
ESTIMATED TOTAL CURRENT COSTS:		$12,085,000
Adjust CCCI from 5959 to 6069		$223,000
ESTIMATED TOTAL CURRENT COSTS June 2015:		$12,308,000
Escalation to start of construction 46 Months @ 0.42%/month:		$2,378,000
Escalation to midpoint of construction 9 Months @ 0.42%/month:		$555,000
ESTIMATED TOTAL CONTRACTS		$15,241,000
Contingency at 5%		$762,000
ESTIMATED TOTAL CONSTRUCTION COST		$16,003,000
Acquisition Phase		$0
Preliminary Plan Phase Indirect Costs (11% of Estimated Total Contracts):		$1,677,000
Working Drawing Phase Indirect Costs (7% of Estimated Total Contracts):		$1,067,000
Construction Phase Indirect Costs (17% of Estimated Total Contracts):		$2,591,000
ESTIMATED INDIRECT COSTS:		$5,335,000
TOTAL ESTIMATED PROJECT COST		**$21,338,000**

STATE OF CALIFORNIA									Budget Year 2016-17
CAPITAL OUTLAY BUDGET CHANGE PROPOSAL (COBCP)						Proj ID:			0000920
FISCAL IMPACT WORKSHEET							BU/Entity:		3540
Department Title:	Department of Forestry and Fire Protection						Progarm ID		2485
Project Title:	Statewide: Replace Communications Facilities, Phase V						COBCP #:		2
Program Category:	Critical Infrastructure Deficiency						Priority:		3
Program Subcategory:							MA/MI:		MA

			Existing Authority	January 10 Action	April 1 Action	May 1 Action	May 14 Action	Special Action	Project Total
FUNDING bu-ref-fund-eny-year	ph	action							
3540-301-0001-16-16	P	BA		1,677					1,677
3540-301-0001-17-17	W	FF		1,067					1,067
3540-301-0001-18-18	C	FF		18,594					18,594
									0
									0
									0
									0
									0
									0
									0
									0
									0
									0
TOTAL FUNDING			0	21,338	0	0	0	0	21,338
PROJECT COSTS									0
Study									0
Acquisition									0
Preliminary Plans				1,677					1,677
Working Drawings				1,067					1,067
Total Construction or Design-Build				18,594	0	0	0	0	18,594
Equipment (Group 2)									0
TOTAL COSTS			0	21,338	0	0	0	0	21,338
CONSTRUCTION OR DESIGN-BUILD DETAIL									
Contract				14,616					14,616
Contingency				762					762
A&E									0
Agency Retained				60					60
Other				3,156					3,156
TOTAL CONSTRUCTION OR DESIGN-BUILD			0	18,594	0	0	0	0	18,594
FUTURE FUNDING				0	0	0	0	0	0

SCHEDULE	mm/dd/yyyy
Study Completion	
Acquisition Approval	
Start Preliminary Plans/Performance Criteria	1/1/2017
Preliminary Plan/Performance Criteria Appro	1/2/2018
Approval to Proceed to Bid	1/2/2019
Contract Award Approval	5/2/2019
Project Completion	10/31/2020

PROJECT SPECIFIC CODES

Proj Mgmt:	DGS	Location:	Statewide
Budg Pack:	N	County:	Various
Proj Cat:	CRI	City:	Various
Req Legis:	N	Cong Dist:	Various
Req Prov:	N	Sen Dist:	Various
SO/LA Imp:	N	Assm Dist:	Various

STATE OF CALIFORNIA — **Budget Year 2016-17**
CAPITAL OUTLAY BUDGET CHANGE PROPOSAL (COBCP) — Proj ID: 0000920
FISCAL DETAIL WORKSHEET

Department Title:	Department of Forestry and Fire Protection	**BU/Entity:**	3540
Project Title:	Statewide: Replace Communications Facilities, Phase V	**Progarm ID**	2485
Program Category:	Critical Infrastructure Deficiency	**COBCP #:**	2
Program Subcategory:		**Priority:**	3
		MA/MI:	MA

Identify all items which fit into the categories listed below. Attach a detailed list if funding is included in this request. Provide descriptions and summary estimates for items for which you plan to request funding in the future. When possible, identify funding needs by fiscal year (BY+1 through BY+4).

PROJECT RELATED COSTS	COST	TOTAL
AGENCY RETAINED:		
Project Management	20	
Telecom	40	
TOTAL AGENCY RETAINED		60
GROUP 2 EQUIPMENT		
TOTAL GROUP2 EQUIPMENT		0

IMPACT ON SUPPORT BUDGET	COST	TOTAL
ONE-TIME COSTS		
TOTAL SUPPORT ONE-TIME COSTS		0
ANNUAL ONGOING FUTURE COSTS		
TOTAL SUPPORT ANNUAL COSTS		0
ANNUAL ONGOING FUTURE SAVINGS		
TOTAL SUPPORT ANNUAL SAVINGS		0
ANNUAL ONGOING FUTURE REVENUE		
TOTAL SUPPORT ANNUAL REVENUE		0

STATE OF CALIFORNIA — **Budget Year 2016-17**

CAPITAL OUTLAY BUDGET CHANGE PROPOSAL (COBCP) — Proj ID: 0000920

SCOPE/ASSUMPTIONS WORKSHEET

Department Title:	Department of Forestry and Fire Protection	BU/Entity:	3540
Project Title:	Statewide: Replace Communications Facilities, Phase V	Progarm ID	2485
Program Category:	Critical Infrastructure Deficiency	COBCP #:	2
Program Subcategory:		Priority:	3
		MA/MI:	MA

The proposal is for preliminary plans funding to replace existing telecommunications infrastructure at six communications sites with new telecommunications towers, vaults and other supporting infrastructure as required and add an additional tower at a seventh site. New facilities are built to meet essential services seismic standards, withstand 100 mph winds and have 25-year serviceable life spans. Towers are self-supporting, 4-legged lattice structures with upper monopoles and with safety ladders, platforms and lightning arrestors. Radio equipment vaults are concrete construction. The scope of work includes installation of new emergency backup generators, fuel systems, multi-purpose alarms, heating, venting and cooling systems and VHF and microwave communication equipment complete with all necessary accessories. Site work includes demolition of existing structures, extension of utilities, road and site paving and security fencing as site needs dictate.