

**BIG BEAR VALLEY
COMMUNITY WILDFIRE
PROTECTION PLAN
(CWPP)**

**ADDENDUM II
“A SYSTEMS APPROACH”**

July 2018

Jeff Willis, Fire Chief
Mike Maltby, Fire Marshal
Big Bear Fire Department



Table of Contents

Page

Section 1.0 Introduction.....	1
Section 2.0 Maps.....	1-8
Section 3.0 Fuels Treatment.....	9-13
3.1 Fuels Reduction.....	10-11
3.2 Hazard Tree Removal.....	11
3.3 Curbside Chipping.....	12
3.4 U.S. Forest Service Fuel Reduction.....	13
Section 4.0 Wood Shake/Shingle Roofs.....	14
Section 5.0 Evacuation Routes.....	15
Section 6.0 CWPP Projects Matrix.....	16-22
Section 7.0 Fuels Reduction Prescription.....	23
Section 8.0 Results of Community Outreach.....	23-24
Section 9.0 Collaboration.....	24
Section 10.0 Conclusion.....	24

SECTION 1.0 INTRODUCTION

Since the Big Bear Valley Community Wildfire Protection Plan (CWPP) was written in 2005, various wildfire prevention strategies that were identified at that time have been implemented and completed. The CWPP received an addendum in 2010 in which many of the projects and information was updated. This 2018 document is intended to serve as the second addendum to the 2005 CWPP and to serve as an update on the status of those previously implemented wildfire prevention projects and to identify any additional projects needed to further wildfire protection efforts. Since the 2005 CWPP, significant progress has been made through an ongoing and well-coordinated effort between various local, state and federal agencies to reduce the amount of hazardous fuels within the valley through a wide range of fuel reduction projects. This addendum will also provide an update on the most recent fire history within the San Bernardino National Forest.

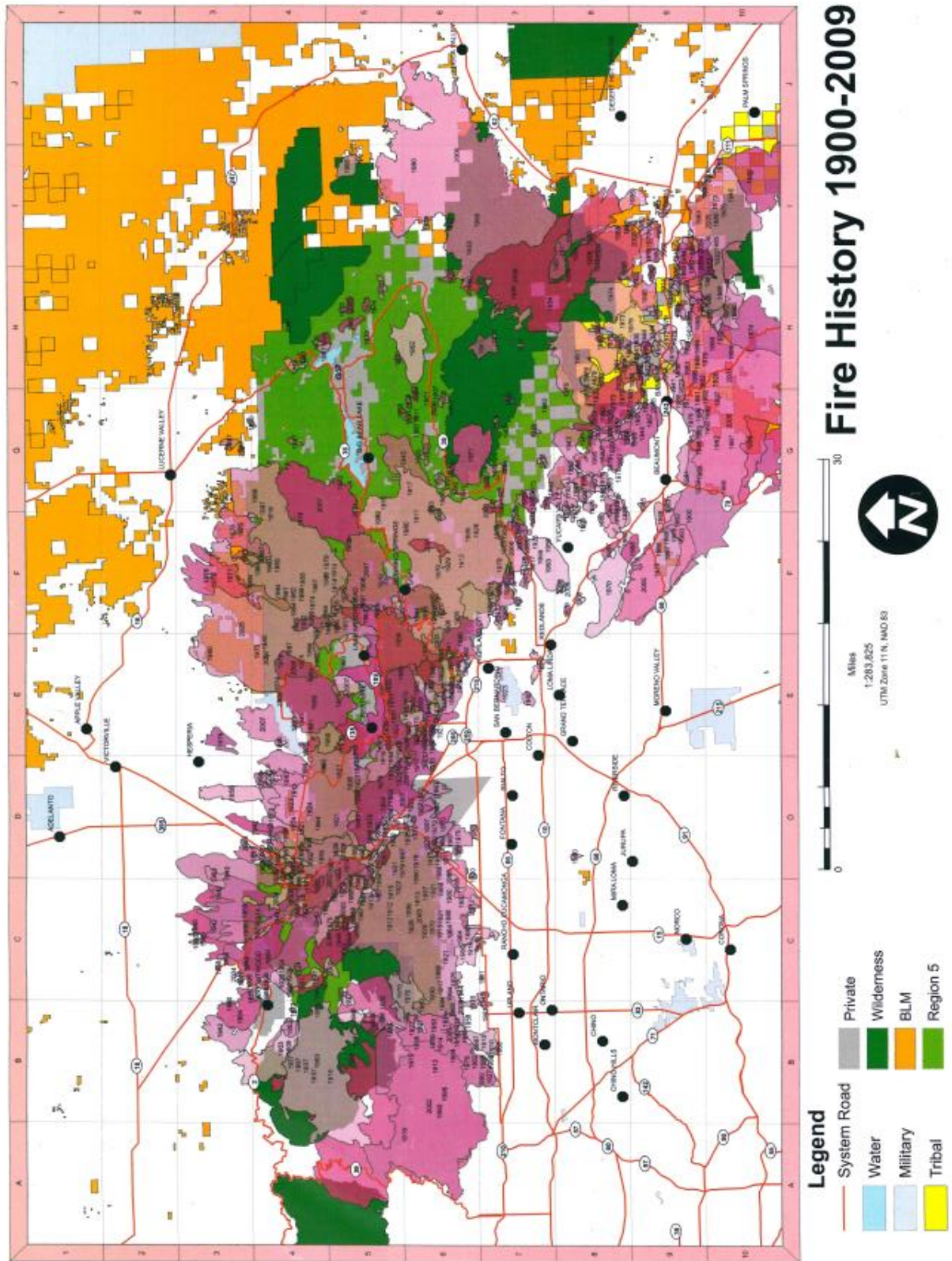
In 2004, the USDA Natural Resources Conservation Service (NRCS) received approximately \$120 million in federal funds to remove dead trees and create sheltered fuel breaks across the Mountain Top Ranger District of the San Bernardino National Forest and the adjoining Big Bear Valley area. In addition, the U.S. Forest Service and CAL FIRE have been active in their fuel reduction efforts to provide protection for Big Bear Valley residents.

Overall, the progress made since 2005 has been extremely vital to the potential success of protecting the communities within the Big Bear Valley from a catastrophic wildfire. In total, the Big Bear Fire Department has received a total of **\$5,107,530.44** in grant funding. Furthermore, there has been a well-coordinated mutual aid effort between various local, state, and federal agencies.

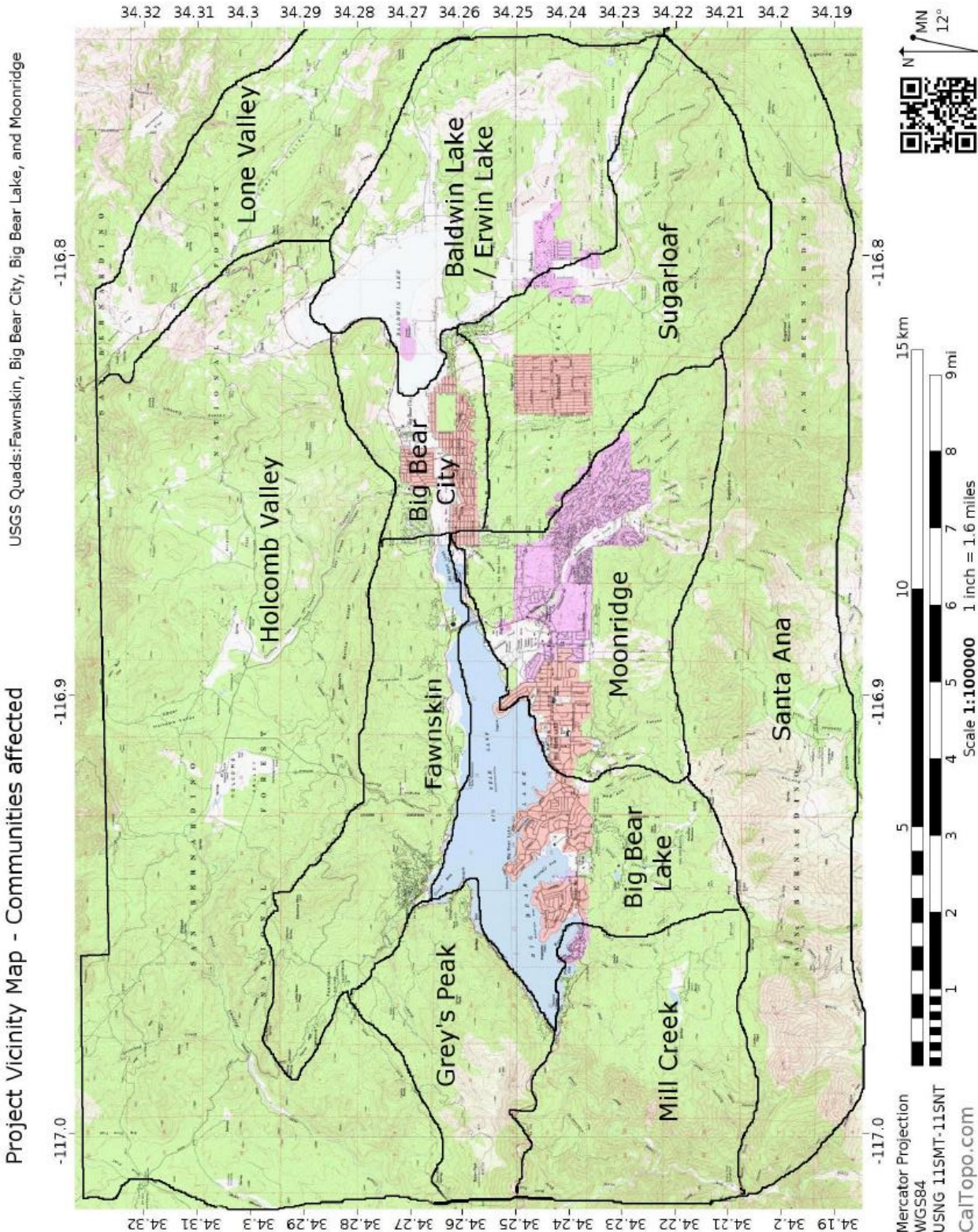
SECTION 2.0 MAPS

The area within the Big Bear Valley and the adjoining San Bernardino National Forest has been impacted by wildland fire for centuries. The Fire History Map (Map 2.1), the Project Vicinity Map (Map 2.2), the Big Bear Valley Fuel Reduction Projects Map (Map 2.3), the Santa Ana Project Area Fuel Treatment Level Map (Map 2.4), the North Big Bear Fuels Reduction and Forest Health Proposed Project Area Map (Map 2.5), the Big Bear Valley Curbside Chipping Program Map (Map 2.6) and the Proactive De-energization to Enhance Public Safety (Map 2.7) are provided.

Map 2.1

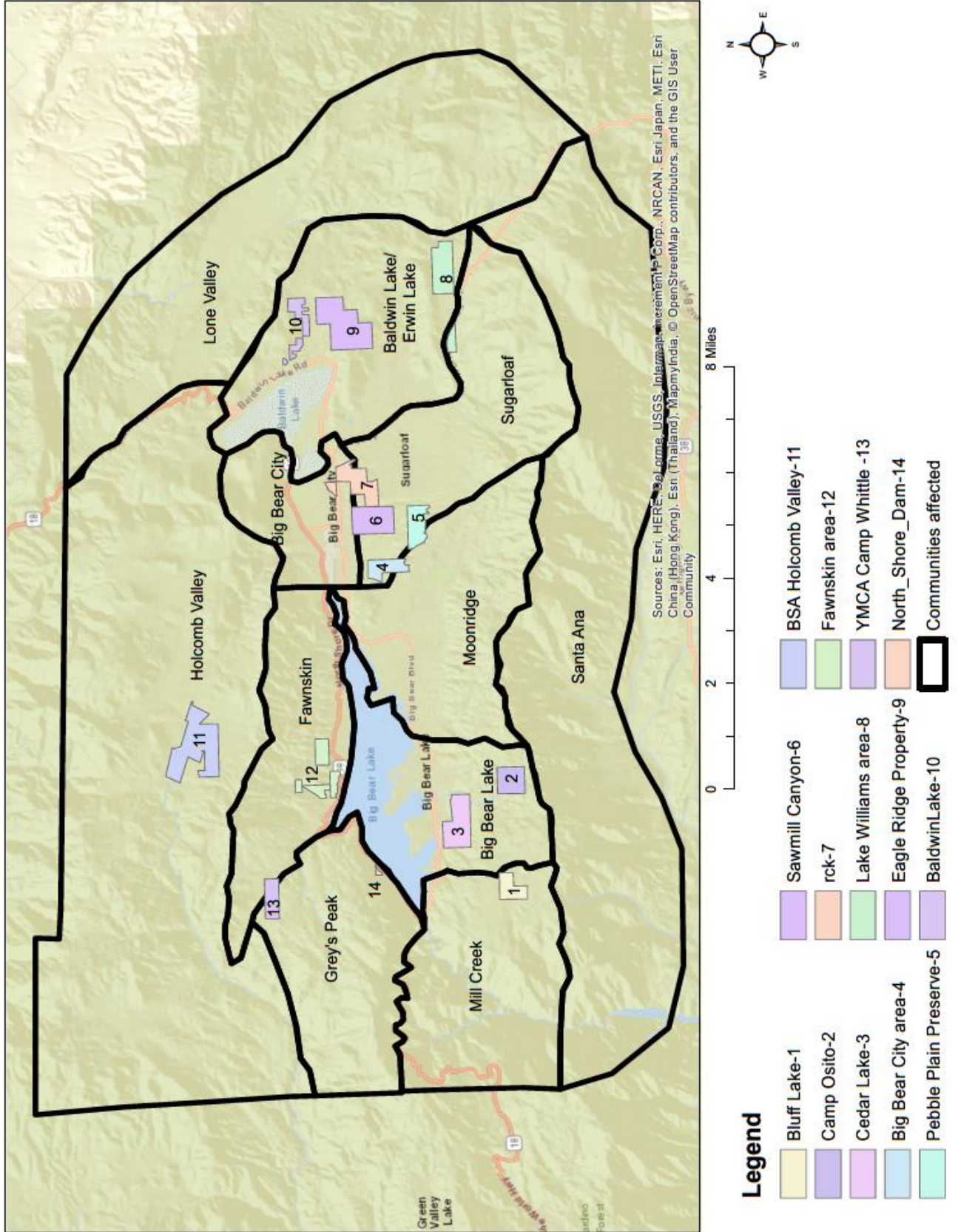


Map 2.2

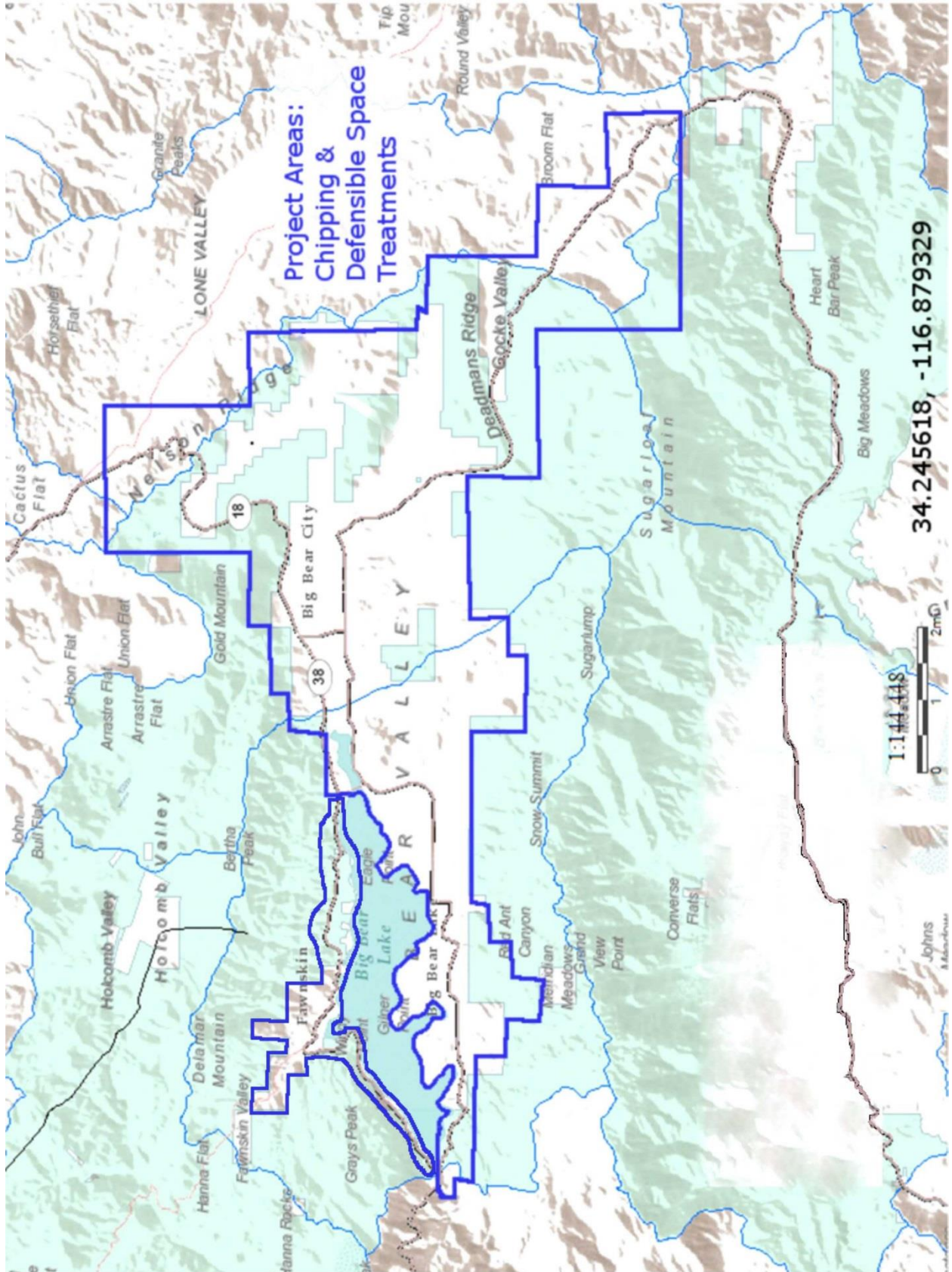


Map 2.3

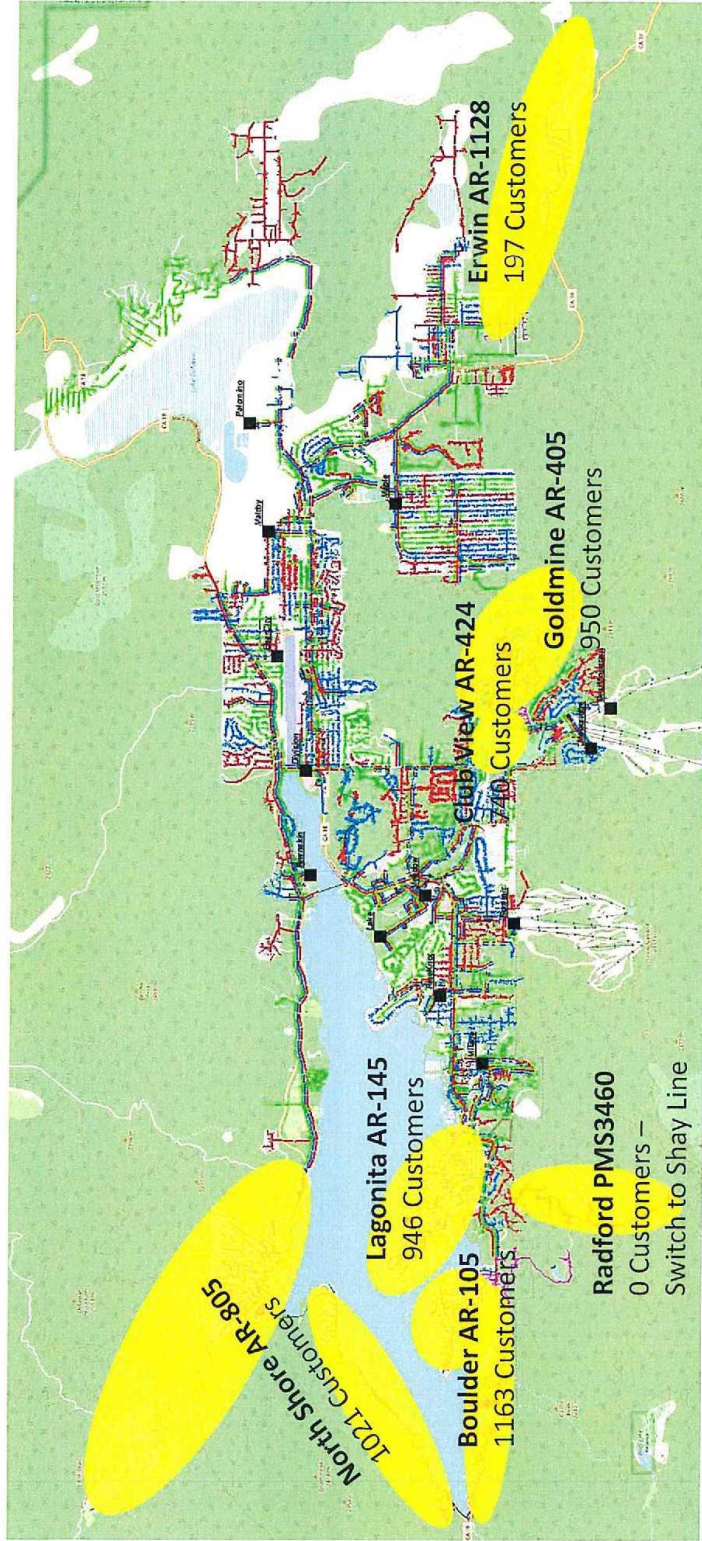
Big Bear Valley Fuel Reduction Projects



Map 2.6



Proactive De-energization to Enhance Public Safety



- Pro-active selective de-energization when National 7-day Significant Fire Potential is ORANGE or RED for our area and wind gusts (3 seconds or more) are greater than 55 MPH.

Map 2.7

SECTION 3.0 FUELS TREATMENT

Thomas Bonnicksen, PhD, is a historian of North American forests and the “father” of “restoration forestry”. He is professor emeritus of forest science at Texas A & M University, visiting professor at the University of California at Davis, visiting scholar at The Forest Foundation, and the author of “America’s Ancient Forest”.

On Sept. 6, 2013, Dr. Bonnicksen wrote an article for the Calaveras Enterprise discussing the potential impact of the Rim Fire, burning at the time in the Yosemite National Park and the Stanislaus National Forest.

From 1985 to 2012, wildfires consumed more than 76 million acres, destroyed thousands of homes and cost \$25 billion to fight. In addition, each acre burned produced about the same amount of greenhouse gases, like CO₂, that 45 cars emit per year. Historically, fire was part of America’s forests, but not the monsters of today. Most historic forests burned often and gently. The flames were usually low, creeping through grass and pine needles, leaving most large trees unharmed and only briefly flaring up in scattered log piles, brush or thickets. These fires kept historic forests open, patchy, diverse and safe from ravenous fire monsters.

Fire monsters can only devour landscapes if we feed them fuel. More than a century ago, we began protecting forests from fire. We did not know that lightning and Indian fires kept forests open and immune from monster fires. More recently, we adopted an anti-management philosophy that almost completely bans logging and thinning on public lands, even when it is designed to restore historic forests and prevent monster fires. Now, fallen trees and branches clutter the ground and young trees and brush grow so thick that it is difficult to walk through many forests. It is not surprising that the gentle fires of the past have become the fire monsters of the present.

Even so, we keep feeding fuel to the fire monster while blaming global warming, high winds, drought or any other excuse we can think of that keeps us from taking responsibility for the death and destruction these monsters create. We know the climate is warming just as it has done many times for millions of years. We also know that fires burn hotter when the temperature is high, fuel is dry and winds blow strong. Even so, these conditions only contribute to fire intensity. It is a scientific fact that a fire can’t burn without fuel. The more fuel the bigger the fire, regardless of drought or wind.

We can thin little trees and use prescribed burns to reduce fuels, but that is not enough. We must use history as a guide and restore the natural immunity of our forests to monster fires. That means cutting whatever trees are necessary, big or small, to recreate the patchiness and diversity of historic forests that kept fires gentle and helpful.

It is easy to do. Foresters have the knowledge to restore our forests. They can do it safely and with sensitivity using thinning and prescribed burning. Management has the added advantage of creating jobs, producing forest products and generating revenue to cover the cost. If we act now,

we can put the fire monster back in its den and create forests that rival the beauty and sustainability of historic forests.

SECTION 3.1 FUELS REDUCTION

The destructive “Old Fire” in 2003 and the subsequent “Butler”, “Butler II” and “Slide Fires” of 2007 led to the commitment by the public to treat over 3,000 acres of private lands within the Big Bear Valley with fuels reduction. The “Lake Fire” in 2016 and the “Holcomb Fire” in 2017 have only added emphasis to the need to manage the fuels within our forest environment. Although these lands have been treated during the last 15 years, nature does not stop growing and many of these properties will need additional fuel reduction work, in addition to any fuel reduction that can be implemented over the course of the coming years.

Overstocked forest before fuels reduction. Location: Camp Tahquitz



After fuels reduction Location: Camp Tahquitz



With the large fires of 2017 in Napa, Los Angeles, Santa Barbara and Ventura Counties, it cannot be stressed enough that the private lands in the Big Bear Valley be reviewed on the ground and additional hazardous fuel reduction projects be implemented.

SECTION 3.2 HAZARD TREE REMOVAL

The infestation of bark beetle throughout the San Bernardino National Forest has been an ongoing problem. The infestation that began in the late 1990's has resulted in an ever-growing number of dead or dying trees, many of which are situated in residential neighborhoods and pose a significant threat to public safety. Through grant funding opportunities, the Big Bear Fire Department has implemented a hazardous tree removal program which focuses on the removal of those dead trees which pose the greatest threat to habitable structures, roadways and infrastructure. The program in its current form, is designed to assist the property owner with removal of the hazardous tree(s) with a reimbursement of 50% of the removal cost of up to \$1,000.00. Through this program, over 60 hazardous trees have been removed to date. With the persistence of draught conditions throughout the region, it is expected that the occurrence of dead, dying and diseased trees will continue to escalate. The Big Bear Fire Department will continue to partner with cooperating agencies and seek grant funding to manage the hazardous tree problem.



SECTION 3.3 CURBSIDE CHIPPING

Beginning in 2006, the Big Bear Fire Department applied for and received grant funding to establish a curbside chipping program. The Annual Curbside Chipping Program encourages homeowners to thin or remove hazardous fuels from their property per established defensible space guidelines and place the vegetation at the curbside. Each year grant funding has been secured through the California Fire Safe Council/USFS and CALFIRE with the grant match requirement being achieved through in-kind services of property owners creating defensible space. The homeowner is then directed to complete the chipping request form online at Thinisin.org. The Annual Curbside Chipping Program has proven to be a very successful and popular program. To date, the program has assisted in removing **4182.67** cubic tonnes of biomass from Big Bear Valley properties. (See Map 2.6). Ongoing vegetation management is necessary on an annual basis to maintain proper defensible space. The Big Bear Fire Department will continue to seek grant funding opportunities to sustain this program into the future.



SECTION 3.4 U. S. FOREST SERVICE FUEL REDUCTION

Due to the location of the Big Bear Valley, surrounded by the San Bernardino National Forest, it was identified that any fuel reduction on private land would have to be accompanied by fuels reduction on public lands administered by the U.S. Forest Service. To date, several thousand acres of U.S. Forest Service lands have been treated for hazardous fuel reduction. These include the Highway 38 corridor from Big Bear City towards Onyx Summit and Skyline Ridge area between Snow Summit and Bear Mountain Ski Resorts. Many more areas, including the Nelson Ridge project, the Santa Ana project (Map 2.4), and the North Big Bear Fuels Reduction and Forest Health Project Area (Map 2.5) are planned for treatment as federal funding mechanisms become available.



SECTION 4.0 WOOD SHAKE/SHINGLE ROOFS

The original CWPP in 2005 identified the hazards posed by wood shake/shingle roofs and the addendum in 2010 identified the need to explore opportunities in which the fire departments could assist homeowners in the replacement of these roofs. Since that time, the Mountain Area Safety Taskforce (MAST) Shake/Shingle Roof Replacement Program has assisted 632 homeowners, throughout the various San Bernardino mountain communities, with the replacement of their flammable wood shake/shingle roofs with more fire-resistant roofing materials and non-ember intrusion vents. The Shake/Shingle Roof Replacement Program was made possible through grant funding opportunities from CalOES/FEMA and CALFIRE.



SECTION 5.0 EVACUATION ROUTES

A significant concern identified through the public input process, was the establishment of neighborhood evacuation routes. Many areas within the Big Bear Valley have road networks which are archaic and confusing. The Moonridge area in particular, presented the biggest challenge. As a result, the Big Bear Fire Department initiated an evacuation route sign project, installing signs in the Moonridge area which clearly identify evacuation routes. Dependent on future grant funding opportunities, the evacuation route sign project is planned to continue through other areas of the Big Bear Valley in the future.



SECTION 6.0 CWPP PROJECTS MATRIX

In the following CWPP Projects Matrix we have listed the projects that will help keep Big Bear Valley fire safe. We have listed the projects, responsible party, etc. to show the vast and various projects needed to produce a fire safe community.

Section 6.0
CWPP PROJECTS MATRIX
 July 2018

Big Bear Valley
 Community Wildfire Protection Plan
 Addendum II 2018

Project Description	Responsible Party	Acres Under Analysis	Thinning	Brushing	Agency Involvement	Initiate Project	Estimated Cost	Management Unit Name	Project Status
Barton Flats	USFS	ACRES 3947	Yes	Yes	USFS	2005	TBD	Santa Ana	Ongoing and continuous
BB Healthy Forest Treatment #1	USFS	492	Yes	Yes	USFS	2005	TBD	Santa Ana	South Big Bear fuels treatment projected 2010
BB Healthy Forest Treatment #2	USFS	670	Yes	Yes	USFS	2005	TBD	Santa Ana	
BB Healthy Forest Treatment #3	USFS	3037	Yes	Yes	USFS	2005	TBD	Santa Ana	
BB Interface	USFS	780	Yes	Yes	USFS	2005	TBD	Big Bear Lake	Completed 2007
BB Skyline 1	USFS	534	Yes	Yes	USFS	2005	TBD	Big Bear Lake	Completed 2007
BB Skyline 2	USFS	86	Yes	Yes	USFS	2005	TBD	Big Bear Lake	Completed 2008
BB Tract South	USFS	66	Yes	Yes	USFS	2005	TBD	Big Bear Lake	Completed 2008
BB Tract Center	USFS	104	Yes	Yes	USFS	2005	TBD	Big Bear Lake	Completed 2008
BB Tract North	USFS	91	Yes	Yes	USFS	2005	TBD	Big Bear Lake	Completed 2008
Bear Mountain	USFS	917	Yes	Yes	USFS	2005	TBD	Moonridge	Ongoing
Fawnskin NW	USFS	927	Yes	Yes	USFS	2006	TBD	Fawnskin	Planning 2010
Glory Ridge Fuels Reduction	USFS	998	Yes	Yes	USFS	2005	TBD	Fawnskin	No Planning
Lakeview West	USFS	122	Yes	Yes	USFS	2005	TBD	Big Bear Lake	Completed 2008
Lakeview East	USFS	50	Yes	Yes	USFS	2005	TBD	Big Bear Lake	Completed 2008
Metcaif	USFS	183	Yes	Yes	USFS	2005	TBD	Big Bear Lake	Completed 2008
Pine Knot	USFS	34	Yes	Yes	USFS	2005	TBD	Big Bear Lake	Ongoing
Snow Summit	USFS	611	Yes	Yes	USFS	2005	TBD	Big Bear Lake	Ongoing
Willow Glen	USFS	16	Yes	Yes	USFS	2006	TBD	Big Bear Lake	Ongoing
Bertha Ridge	USFS	3333	Yes	Yes	USFS	2006	TBD	Sugarloaf	Planning Phase
Lake Erwin & Lake Williams	USFS	2764	Yes	Yes	USFS	2006	TBD	Fawnskin	Planning Phase
Neison Ridge & Baldwin Lake/Pile Reduction	USFS	1430	1430	Yes	USFS	2006	TBD	Baldwin/Erwin Lake	NEPA Review
Pinion Ironwood Fuelwood Sale	USFS	539	539	Yes	Yes	USFS	2010	TBD	Lone Valley
Santa Ana / Clarks Grade Fuel Modification	USFS	1500	1500	Yes	Yes	USFS	2006	TBD	Lone Valley
	USFS			Yes	Yes	USFS	2010	TBD	Santa Ana

Section 6.0
CWPP PROJECTS MATRIX
July 2018

	Responsible Party	Acres Under Analysis	Thinning	Brushing	Agency Involvement	Instate Project	Estimated Cost	Management Unit Name	Project Status
Sawmill	USFS	293	293	Yes	Yes	USFS	2006	TBD	Big BearCity
Section 17	USFS	522	522				2010	TBD	Baldwin/Erwin Lake
Bluff Lake	USFS	1272	1272	Yes	Yes	USFS	2010	TBD	Mill Creek
Grays Peak	USFS	2801	2801	Yes	Yes	USFS	2007	TBD	Gray's Peak
Holcomb West	USFS	2407	2407	Yes	Yes	USFS	2007	TBD	Holcomb Valley
Pollige Canyon	USFS	39	39	Yes	Yes	USFS	2008	TBD	Fawnskin
Heart Bar	USFS	4214	4214	Yes	Yes	USFS	2008	TBD	Santa Ana
Snowslide	USFS	7243	7243	Yes	Yes	USFS	2009	TBD	Holcomb Valley
Delmar Mountain	USFS	2839	2839	Yes	Yes	USFS	2009	TBD	Fawnskin
Holcomb Valley	USFS	3472	3472	Yes	Yes	USFS	2009	TBD	Holcomb Valley
Onyx Peak	USFS	975	975	Yes	Yes	USFS	2009	TBD	Lone Valley
Wildhorse	USFS	5099	5099	Yes	Yes	USFS	2010	TBD	Santa Ana
Arrastre Flat	USFS	7722	7722	Yes	Yes	USFS	2010	TBD	Lone Valley
Santa Ana River	USFS	4186	Yes	Yes	Yes	2008	TBD	Santa Ana	Ongoing
Public Education									
Valley-wide Public Education Prog.	BFA		NA	NA	BFA	2005		Big Bear Valley	Ongoing
Hold demonstration properties in compliance with local defensible space laws	SBCFD, BFA, Fire Safe councils		Yes	Yes	BFA	2009		Big Bear Valley	Ongoing
Conduct landscapers, timber operators training classes	BFA		NA	NA	BFA	2008		Big Bear Valley	Ongoing
Adopt, Valley-wide Ready, Set, Go Program/Develop Brochure	SBCFD, BFA, BBVFSC		NA	NA	BFA	2010		Big Bear Valley	Ongoing
Develop website Thinisin.org	BFA		NA	NA	BFA	2006		Big Bear Valley	Ongoing
Develop Healthy Forest/Defensible Space Outdoor Education class	Pine Summit/ BFA		NA	NA	BFA	2009		Big Bear Lake	Ongoing
Fire Safe Council	BBVFSC		NA	NA	BFA	2005		Big Bear Valley	Ongoing
Educational flyer mailed with utility bill	BFA		NA	NA	BFA	2018		Big Bear Valley	Planning Phase

Section 6.0
CWPP PROJECTS MATRIX
July 2018

Big Bear Valley
Community Wildfire Protection Plan
Addendum II 2018

Responsible Party	Acres Under Analysis	Thinning	Brushing	Agency Involvement	Inlitate Project	Estimated Cost	Management Unit Name	Project Status
Hazardous Fuel Reduction Projects (Private Property)								
Bluff Lake	121	Yes	Yes	Yes	2023		Mill Creek	Proposed
Camp Osito Rancho	160	Yes	Yes	Yes	2023		Mill Creek	Proposed
Camp Cedar Lake	269	Yes	Yes	Yes	2023		Mill Creek	Proposed
Big Bear City Area	133	Yes	Yes	Yes	2023		Big Bear City	Proposed
Pebble Plane Preserve	159	Yes	Yes	Yes	2023		Big Bear City	Proposed
Sawmill Canyon	244	Yes	Yes	Yes	2023		Big Bear City	Proposed
RCK Properties	228	Yes	Yes	Yes	2023		Baldwin/Erwin Lake	Proposed
Lake Williams Area	269	Yes	Yes	Yes	2023		Baldwin/Erwin Lake	Proposed
Eagle Ridge	437	Yes	Yes	Yes	2023		Baldwin/Erwin Lake	Ongoing
Baldwin Lake Area	132	Yes	Yes	Yes	2023		Baldwin/Erwin Lake	Proposed
BSA Holcomb Valley	494	Yes	Yes	Yes	2023		Fawnskin	Proposed
Fawnskin Area	190	Yes	Yes	Yes	2023		Fawnskin	Proposed
YMCA Camp Whittle	120	Yes	Yes	Yes	2023		Fawnskin	Proposed
Valley-wide Neighborhood Chipping Program					2005		Big Bear Valley	Ongoing and continuous
Thinning Projects								
Bear Valley School District		Yes	Yes	BFA	2005		Big Bear Valley	Ongoing
Valley-wide vegetation abatement		Yes	Yes	BFA	2005		Big Bear Valley	Ongoing
Shore/Big Bear Blvd.	Yes/15	Yes	Yes	BFA	C	14,000	Big Bear City	Completed
Shore/Big Bear Blvd.	/15	Yes	Yes	BFA	6/7/2007	Unknown	Big Bear City	Marked
Shay Road	/5	Yes	Yes	BFA	C	9,000	Big Bear City	Completed
CAMP Tanda	10	Yes	Yes	BFA	2007		Big Bear Lake	Completed
Pine Summit	8	Yes	Yes	BFA	Completed		Big Bear Lake	Completed
Valley-wide Neighborhood Chipping Program		NA	NA	BFA	2005		Big Bear Valley	Ongoing
Peery Reservoir	Yes/1	Yes	Yes	BFA	C	6,000	Big Bear City	Completed

Section 6.0
CWPP PROJECTS MATRIX
July 2018

Big Bear Valley
Community Wildfire Protection Plan
Addendum II 2018

	Responsible Party	Acres Under Analysis	Thinning	Brushing	Agency Involvement	Initiate Project	Estimated Cost	Management Unit Name	Project Status
Structure Ignitability Projects									
Adopt ordinance mandating the replacement of shake shingle roofs	BFA, SBCFD		NA	NA		2007/2008		Big Bear Valley	Completed
Propose adopting ordinance to require installation of non-ember intrusion vents	BFA		NA	NA		2010		Big Bear Valley	In process
Adopt defensible space ordinance	BFA, SBCFD		NA	NA		2007/2008		Big Bear Valley	Completed 2014
Adopt 2016 Fire and Building Code and update as needed	BFA, SBCFD		NA	NA		2007		Big Bear Valley	Adopted 2016
Apply for grants to replace wood shake shingle/organic material on roofs	SBCFD, BFA		NA	NA		2010		Big Bear Valley	Ongoing
Fire Insurance Rate Reduction Coordination	BFA		NA	NA		2018		Big Bear Valley	Planning Phase
Fuel Modification Projects									
Condition of Approval - all new developments will be required to submit a fuel modification plan	BFA, SBCFD	Yes	Yes	N/A				Big Bear Valley	Ongoing
Grant Funding for Hazard Tree Identification/Removal	BFA	Yes	Yes	Yes	BFA	2016		Big Bear Valley	Ongoing
Infrastructure Improvement Projects									
Valley-wide siren system that is intended to notify the public to tune into local radio or TV stations in order to receive information of public concerns, i.e., fires, earthquakes, or other emergency situations	BFA			NA	NA	2010		Big Bear Valley	In Process
Install and maintain evacuation route signs throughout Valley directing people to evacuation centers	Public Works/BFA			NA	NA	2010		Big Bear Valley	Ongoing

Section 6.0
CWPP PROJECTS MATRIX
July 2018

Big Bear Valley
Community Wildfire Protection Plan
Addendum II 2018

Responsible Party	Acres Under Analysis	Thinning	Brushing	Agency Involvement	Initiate Project	Estimated Cost	Management Unit Name	Project Status
Develop and implement policy to provide and protect power poles on one way dead-end streets and into/thru the forest. Seek any and all funding available to change out wood power poles on one way out streets and in the forest.	BFA		Yes	Yes	2010		Big Bear Valley	In Process
Implement PUC standards for High Fire Threat Districts(increase vegetation clearance for power lines, higher inspection periodicity for overhead circuits, and enhances construction standards)(Map 2.7)	BVE	Yes	Yes	BFA/ BVE	2018		Big Bear Valley	Ongoing
Industrial Resource Management								
Support ongoing efforts to construct woody biomass utilization electric generating plant	BFA	NA	NA	BFA			Big Bear Valley	Ongoing
Research recycling of pine needles	BFA	NA	NA	BFA	2008		Big Bear Valley	Ongoing
Research recycling of pine needles for fireplace logs	BFA	NA	NA	BFA	2009		Big Bear Valley	Complete
Forest Products Utilization								
Valley-wide Chipper Program	BFA, FSC	NA	NA	BFA	2004/06		Big Bear Valley	On-going
Property owners list for chipped material	BFA	NA	NA	BFA			Big Bear Valley	Ongoing
Develop chipped materials reduction program	BFA	NA	NA	BFA	2018		Big Bear Valley	Planning Phase
Conduct fuels reduction Inspection for insurance compliance	BFA	NA	NA	BFA	2009		Big Bear Valley	Ongoing
Develop firewood policy	BFA	NA	NA	BFA	2010		Big Bear Valley	Ongoing
Green Waste Disposal Program	BFA	NA	NA	BFA	2018		Big Bear Valley	Planning Phase
Slash/Biomass Disposal								
Apply for grant assistance homeowners' vegetation removal	BFA	Yes	Yes	BBLFD			Big Bear Valley	Ongoing

Section 6.0
CWPP PROJECTS MATRIX
July 2018

	Responsible Party	Acres Under Analysis	Thinning	Brushing	Agency Involvement	Initiate Project	Estimated Cost	Management Unit Name	Project Status
Fund grant for elderly, low income property owners	BFA	60	Yes	Yes	Yes	2008		Big Bear Valley	Ongoing
High Value Area Projected									
Spray protection for 1,000 trees	USFS		NA	NA	USFS			Big Bear Valley	Completed
Seek funding for spraying high valued areas	BFA, BBVFSC		NA	NA	USFS			Big Bear Valley	Ongoing
Fire Safety Inspection Program									
At time of new construction - an inspection is conducted, trees marked, and direction is given to limb up trees and bushes by final	BFA	Yes	Yes	NA	BFA	2005		Big Bear Valley	Ongoing
All new construction must comply with requirements in Fire Safety Overlay #1 San Bernardino County Development Code	BFA, SBCFD		Yes	Yes	BFA			Big Bear Valley	
Implement fuels reduction inspection on existing structures when building permit is issued.	BFA		Yes	Yes	BFA	2008		Big Bear Valley	Ongoing

*The proposed timelines herein are subject to change based upon compliance with the National Environmental Policy Act and/or available funding.

SECTION 7.0 FUELS REDUCTION PRESCRIPTION

Each forest is unique and different. However, there are some general fuel reduction prescriptions that can be used to create a more fire resilient forest:

1. A 20-foot spacing between the trunk of each tree. This kind of spacing will result in approximately 100 trees per acre.
2. Pruning lower limbs to a height of 6 feet, or no more than half the tree height, whichever is less. This creates vertical separation between the forest floor and the lowest branches thereby creating a vertical fuel break by removing the ladder fuels.
3. Removal of ladder fuels, such as shrubs, within the drip line of the overstory trees. Again, creating a vertical fuel break.
4. 50-70% reduction in brush species ground cover. A horizontal opening that is 3X the height of the brush species breaks up the horizontal continuity and reduces the rate of spread significantly.
5. Removal of dead/dying/diseased trees as soon as possible. During periods of drought, insect damage and mortality can increase quickly. It is important to remove these trees to prevent the spread of these forest insects (bark beetles). Infested trees must be covered with six mil clear plastic or chipped, onsite, to control the spread of bark beetles.
6. Annual inspections of forest lands to evaluate hazardous fuel loading.

SECTION 8.0 RESULTS OF COMMUNITY OUTREACH

On April 25, 2018, a Community Meeting was held to request the input from Big Bear Valley citizens. Approximately 20 citizens attended with input on a variety of topics, but with all in attendance desiring to have a fire safe community for generations to come. The take away for staff from the Community Meeting included several items that warrant follow-up in future funding opportunities.

1. Educational information inserts in utility billing mailings.
This concept is not new and presents a method to reach all the participants in a specific utility program. In the case of the Big Bear Valley, the only utility that covers all addresses is the Bear Valley Electric Company. Inclusion of this item will require meetings with Bear Valley Electric management and the cost of developing the inserts and additional cost to the utility.
2. Coordinate with fire insurance companies for rate reductions.
The cost of fire insurance in the wildland urban interface (WUI) areas across the United States has soared over the past decade due to the losses experienced by the insurance companies. While the Big Bear Valley is located in a WUI area, the fire history of the Big Bear Valley does not reflect the loss rates of other parts of the nation. The community request for this point is to investigate some manner to more fairly administer the cost of fire insurance for communities, like Big Bear, that do not have loss rate reflected in fire history summaries.
3. Install evacuation signs throughout the Big Bear Valley
This item is included in the overall CWPP Goals, but was stressed by the community that additional areas of the Big Bear Valley would benefit from additional, valley wide

signage, due in large part to the visitor population that is usually unaware of limited egress routes out of the scattered communities or off of the mountain.

4. Green waste disposal program

This item was presented by the community as an additional component to the curbside chipping program. Currently, there is no Green Waste disposal program administered by the solid waste providers in the Big Bear Valley. The Green Waste disposal program would add an additional method to remove bio fuel from private properties and potentially limit the spread of fire should one occur.

SECTION 9.0 COLLABORATION

The following is a list of those contributing and collaborating with this CWPP:

- United States Forest Service, San Bernardino National Forest, Mountain Top Ranger District
- California Department of Forestry, CAL FIRE, San Bernardino Ranger Unit
- Big Bear City Community Services District
- City of Big Bear Lake
- San Bernardino County (Fire, Land Use, Code Enforcement)
- Natural Resources Conservation Service
- Public Input Meeting 4/25/18
- Tim Morin, Consultant, Davey Resource Group

SECTION 10.0 CONCLUSION

The 2018 California Wildfire Protection Plan (CWPP) update is intended to allow the user the ability to reference prior versions (2005, 2010) as well as present current strategic projects. The use of the CWPP document should allow interested parties to review general project descriptions along with the Big Bear Valley agency/agencies that may be involved in either the funding or the actual project work assignments.

While this CWPP is in no way inclusive of all related projects of the same type in the Big Bear Valley communities, it is and should be viewed as a starting point for efforts required to continue forward with valley wide wildland fire fuels reduction efforts.