IN RESPONSE TO: RFP EDCo. AQMD FY 2012-13 AB2766 Attachment 1:

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Meeks Bay Fire Protection District Douglas Taggart P.O. Box 189 Tahoma, Ca. 96142 530.525.7558 fx 530.525.4502 dtaggart.meeksbayfire @gmail.com

PROJECT SUMMARY:

Meeks Bay Fire Protection

District is submitting this request, seeking funding to <u>continue</u> our successful Neighborhood Fuels & Biomass Reduction Program. This curbside pickup of biomass, combined with several local "Green" days, meets the goals/objectives of AB2766. This part of the program cuts VMT's by nearly 100,000 miles, thereby reducing vehicle emissions in a quantifiable way. As a bonus, it reduces emitted smoke and particulate matter, by nearly eliminating yard debris burning, and, when wildfire comes, reduces the amount of available fuels that could burn.

In the past, this program was funded by the State, under CALFIRE and Prop. 40 through 2009. In 2010 it was funded through the American Recovery & Reinvestment Act (ARRA Stimulus funds). The first 3 months of 2011 were funded by USFS Fuels Reduction grant monies while the last 2 months were funded by the current AB2766 funds that we have requested an extension for, to early August of 2012.

Right now, given that extension, we anticipate spending out the 2011-12 AB2766 funds by the end of July or early August, leaving the rest of the 2012 biomass gathering season unfunded. If the program is discontinued, the potential exists to add almost 95,000 miles of travel just from our District's residents. By using their own vehicles, to dispose legally of their own biomass materials, as required by law, under Public Resources Code 4291, we could see increased emissions as the downside to reducing or eliminating this very successful District Program. This does not address the issues of potential increased burning or catastrophic wildfire.

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John Pang, CHIEF

BOARD OF DIRECTORS: Edward I. Miller Nicholas J. Kromydas Jane L. Warmack Bruce C. Massie Stephen W. Hyde

Ms. Kerri Williams EDCAQMD 2850 Fairlane Ct. Placerville, CA 95667

March 19, 2012

Dear Ms. Williams,

I am authorized to apply for a grant committing our staff as in-kind assistance and hard dollars for a grant application for our Neighborhood Fuels and Biomass Reduction Program.

Our agency is very committed to cleaning the environment in the Tahoe Basin and helping to sustain the pristine area we live in. Through studies, it has been proven that particulate matter contributes to the loss of clarity in Lake Tahoe. Additionally, we can all see the impacts of smog in the air that we breathe during the morning inversions.

Vehicular emissions play a large role in the daily air quality here in the Tahoe Basin, and vehicle miles from our constituents disposing of defensible space biomass and fuels (pine needles, small branches, etc.) really add up, considering the dump is about 22 miles away.

In the event that El Dorado County Air Quality Management District graciously funds this program, I am authorized to sign a contract for the grant on the District's behalf. We will use the funding to help minimize miles on the road here in Tahoe, which will immensely help the environment as a whole.

Thank you for your kind consideration,

John Pang

Fire Chief

PROJECT OUTLINE:

RFP El Dorado Co. Air Quality Management District FY 12//13 Motor Vehicle Emission Reduction Projects Under AB2766

Area of Application under Eligible Project Types List

Motor Vehicle Emission Reduction

1. <u>Continued</u> reduction of vehicle miles traveled by privately owned vehicles (POV's) by offering curbside pickup and reutilization of Defensible Space created Biomass.

Reduction in burning of Biomass

- 1. Free pickup & removal of Biomass generated by home and property owners almost eliminates yard burning
- 2. Reduction in overall available Biomass in the WUI, that could burn, in a catastrophic wildfire.

PROJECT DESCRIPTION:

Introduction to PRC 4291

California Public Resources Code (PRC) 4291 requires home and property owners, statewide, to reduce flammable vegetation around all homes and structures, to a set criteria, legally enforceable by CALFIRE. Popularly known as "creating Defensible Space", the removal of this vegetation creates a large amount of biomass material which must be disposed of properly and legally.

Generally, only two legal choices exist. When it first became law a few years back, the common solution for home owners was to either burn the material on site (potential escape of fire, smoke particulates, and health effects all have issues) or load the material into pickups, or garbage bags into the car, and head for the nearest legal landfill.

Most fire districts, ours included for obvious reasons, didn't like the first option. The second option tended to end up with only a bare minimum of work getting done in order to create the least amount of biomass that had to then be carted off to the local dump. Or, as was often the case, large amounts of woody biomass would be dumped at the end of remote roads, usually on public property, which totally defeated the purpose of PRC 4291.

In order to solve both problems and help with the dumping issue, most rural fire protection districts applied for, and received funding from, California's Prop. 40, administered through CALFIRE. With this funding, (along with AQMD's past generous support) we, like most fire districts,

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created a chipping and biomass crew and obtained needed equipment to make it work on the scale needed. MBFPD used that Prop. 40 funding the past few years, through 2009. We were able to keep the program running in 2010 by the one-time infusion of ARRA Stimulus funding. We did receive 2011-12 AB2766 funding, under this very program, but the lateness of signatures did not activate the program until the 21st of August of 2011, midway into our summer season. We have requested an extension beyond 30 June of this year, to finish the 2011/12 AB2766 Program and anticipate that will happen the end of July or early August.

This request, for the 2012-13 FY, takes up where that one ends. Award of this full amount would take our successful program through the rest of 2012 and allow "start up" funding for the beginning of 2013.

PROJECT ORGANIZATION:

Meeks Bay Fire Protection District has offered a curbside chipping and biomass removal program, at no cost to our home and property owners, since the early 2000's. This very successful Biomass pickup and reutilization program turns out to have several benefits, besides the obvious one of improving Defensible Space in our communities. It's not if the wildfire comes, but rather WHEN it comes.

This fuels reduction in and around the communities and the Wildland-Urban Interface (WUI), increases public safety by lowering fire intensity, flame height and rate of spread, when fires occur and regardless of cause or source. This gives the public additional time in which to safely evacuate and allows the fire responders to better attack the incoming fire, (in some cases, out-going fire when a structure is the source of ignition) protecting life, property and the environment.

Of course, any catastrophic wildfire, such as the Angora Fire of five years ago at South Lake Tahoe, emits a tremendous amount of ash, smoke, chemicals and other particulates, on a massive and uncontrollable scale. All are either unhealthful to humans and ruinous upon our water sources and natural environment, especially here in the Tahoe Basin.

Historical research, using tree rings and coring, clearly shows that up until the 1880's any given acre here in the Tahoe Basin, experienced some level of wildfire activity every 15-29 years. Evidence also shows most were of limited scope and intensity and, in fact, were part of the natural mechanisms by which our Sierra Nevada mixed-conifer forests survived and reproduced. (Many seeds actually require heat from such low intensity fires in order to germinate while modern, out of control, wildfires put out too much heat killing virtually everything.)

Since about 1880, the "Smokey the Bear" idea that we "MUST PREVENT WILDFIRES" took hold and <u>ALL FIRE BECAME BAD</u>. We now find that these low intensity, understory fires every few years, actually cleared out thick undergrowth along with dead, dying and downed woody debris, creating a more healthful forest, environment and watershed. Fire was actually required as part of a healthy environment!

The catastrophic wildfires we see today would almost never have occurred as forests then were much more open, with only about 1/10th the amount of biomass per acre, as many of our forests have become, without fire, today. Our modern efforts at forest fuels reduction these past few years, is our attempt to mimic some of the conditions that predate our attempts to totally suppress fire. They open up the woods by reducing the number of trees and brushy biomass per acre.

By removing much of these biomass fuels, before a wildfire, we are in effect, reducing ash, smoke, chemicals and particulates when a fire does occur. The material removed is re-purposed to our best interests, including burning in Co-Gen plants, but with proper emissions controls for smoke and particulate matter. Contrast this to the unbelievable scale of pollutants going into the air and water, from the seemingly normal, at least to us, wildfires of today.

But, the additional benefits of tying together this biomass removal, with a coordinated program of collection, transport and in many cases, a reutilization of produced materials brings us to also realize a reduction in vehicle miles traveled or VMT's. This is Goal #1 for this RFP. Finally, the program also reduces to near zero that amount of yard waste that gets burned in the back yard or dumped at the end of some forest road, usually on public property.

While we will continue our curbside biomass pickup, using last year's AB2766 funds (that didn't become available until 21 August rather than 30 June) these will run out mid summer. Without additional available funding to complete the 2012 season, we would have to greatly reduce, or even shut down the program for the remainder of the summer, or draw funding from one current source that is more geared towards the actual fuels reduction program on vacant parcels, itself a valued program.

This would obviously increase potential fire risks to the home and property owners within the District. It would also increase VMT's as folks are forced into making the 44 mile round trip to the landfill near Truckee, to dispose of their own biomass, as per PRC 4291, or take us back to the days of backyard burning or dumping.

This is why we respectfully make this request, for <u>any amount available</u>, up to the programs' entire requested costs. This would allow continued biomass collection, reduce outdoor burning and reduce vehicle miles traveled, as well as improving and protecting the watershed and environment of the Tahoe Basin, all under the same program.

Again, this request is a scalable one, not an all or nothing request. Any amount available to us will allow our Neighborhood Fuels & Biomass Reduction Program to continue, at least at some level through to the end of the 2012 season. Of course, preferably, a full 100% coverage would accomplish the intent of the entire program and carry it forward through 30 June of 2013, the start-up date for the 2013 Season.

Such funding allows us to create a seasonal paid staff that travels the District, at home or property owner's request, to pick up their biomass material created while complying with PRC 4291. There is no limit to the amount they generate, nor the number of times they can call, so we get the maximum "bang for our buck" of neighborhood fuels & biomass reduction, through this service. The home or property owner does not have to make multiple, 44 mile round-trip, runs to the Truckee landfill. We then re-utilize or re-purpose this material, through programs not available to the individual, due to our economy of size and scale.

This program, when funded in full, does three positive things. First, and direct to this AQMD program under AB2766, it reduces significantly, within our District's borders, the Vehicle Miles Traveled (VMT), using Privately Owned Vehicles (POV), by home and property owners, in order to meet compliance requirements of disposal.

Secondly, it eliminates dumping and thirdly, it reduces the open air burning of vegetative material, almost eliminating this practice on private holdings here in our West Shore portion of the Tahoe Basin, not to mention fire escape potential. (It is still perfectly legal for individuals to do these burn piles on "burn days", we just wish to continue to discourage it by offering a better option through curbside pickup.) Obviously, from an AQMD standpoint, this is an important amount of emissions <u>not</u> being created, though difficult to quantify.

To address this second part, let me provide an estimate of the scale of this program. In 2010 we picked up and either moved or re-purposed over 8600 cubic yards of biomass. Our calculations showed that up to 167,000 miles of travel by privately owned vehicles had been replaced by under

For 2011, we had about a 25% drop in the participation and biomass generated. Several reasons contributed to this change including the late start to summer, due to snow, and the early onset of rains in October. Also, the weak economy in general meant that many owner-families did not make as many trips up this past season, nor had additional private funds available for yard and tree work. Both, we believe, added up to reducing the amount of work that was completed and its' biomass created.

Still we made almost 500 "house calls" for biomass pick-up. Over 5000 cubic yards of biomass were removed and re-utilized. Our crews drove about 6000 miles over the summer, thus saving almost 95,000 VMT's, of residents driving to and from the landfill over near Truckee. This is 4400 one way trips of 22 miles each.

Our Program clearly has a cost and environmental benefit, not only by reducing the various automotive generated emissions but also less biomass being burned in the open. It also allows for the positive usage of much of the biomass in controlled firing at Co-Gen plants. Further, much material is used in local erosion control projects which allow for the slow release of the carbon sequestered in the biomass material and, at the same time, protecting water quality and habitat here in the Tahoe Basin.

Without continuation of these types of grant resources, our District would be less able to help property and home owners comply with PRC 4291. This would increase their VMT's of POV's, as they would have to drive multiple trips to the landfill. It also means less can be spent on Fuels Reduction Projects in the Wildland-Urban Interface (WUI Zones). Both are equally important programs of reducing Wildfire Risk to Communities, as identified by the Blue Ribbon Commission of experts and our Community Wildfire Protection Plan, following the Angora Fire in the Lake Tahoe Basin.

In others words, without the biomass collection program fully funded into the future, "we are robbing Peter," who is trying to reduce forest fuel loads and fire intensity potential, "to pay for Paul's" property clean-up disposal costs requiring a long drive to dispose of their created biomass.

Without <u>continued</u> funding, even at partial program cost levels, such as from this proposal, eventually we can only fund the landscape fuels

reduction programs the USFS grants were allocated for. That means home and property owners must either return to burning, dump it at the end of a back road or get back on the road and do it themselves, resulting in increased emissions and a variety of other environmental factors.

Thank you for your time and consideration of our request.

PROJECT BACKGROUND:

California Public Resources Code 4291 requires statewide, specific measures and actions, by home and property owners, to reduce the threat of wildfire on privately owned property. Commonly called "Defensible Space", it requires modification, and significant removal of, vegetation within 100 feet of all buildings and structures, at the owners' expense. In addition, local ordinance requires owners of vacant parcels, within said 100 feet of neighboring owners' structures, to also create defensible space.

This legally enforceable modification of vegetation creates a variety of types of biomass materials which must be disposed of properly. Except for relatively rare instances of prescribed fire events consuming "burn piles", this usually means the home or property owner must arrange for this biomass material to get from their location to the nearest approved landfill or re-utilization.

Large projects typically rent dumpsters and place them on-site, using landscaping companies and their labor to fill them. However, in our District, few such events are of a scale to require this. (Although we do try to offer several such "Green Day" events each year, thus the request, in this proposal, for six 30-yard dumpsters.) Though we have been doing Defensible Space Inspections for years, following CALFIRE's enforceable requirements of PRC 4291, we still have hundreds of parcels that have yet to have a first treatment. Additionally, a new ordinance now applies to all vacant parcels as well, which will assure a never ending supply of removed biomass that must be dealt with...EVERY YEAR.

Here in Meeks Bay's District, the nearest approved biomass acceptance facility is located 22 miles north, off US Highway 89, just south of the Town of Truckee. On average, a home or property owner must make a round trip of some 44 miles, in order to dispose of this accumulated material, required under California State PRC 4291. By sheer volume, most homeowners in the past, had to make multiple trips. And, in the summer tourist season, this trip often entails sitting in stop-and-go commuter traffic through Tahoe City for up to an hour and a half, for the 22 mile

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drive. In and of itself, this idling in congestion is a significant additive to vehicle emissions not captured in this report's calculations. (Who would have thought snarled traffic in the mountains but it's true...every summer day, all summer long!)

Meeks Bay FPD has quantified these materials as to types and volumes, based on actual field work, including this same curbside pickup program, over the past 5 plus years. The normal method is for the home or property owner to bag small biomass materials; using the common "black trash bag" we are all familiar with. They then call us for chipping, if needed on larger material, and biomass pickup. The average call in 2010 produced 6.6 cubic yards of biomass per property.

Such bags contain, on average, about 1/3 cubic yard of biomass, most often chips, cones, pine needles, bark, small limbs and twigs. Further, on average, the home or property owner throws 6 or 7 of these into their vehicle and makes that round trip drive of 44 miles to the landfill, to dispose of them, at a set cost of \$15-20 per load, for those 2-3 cubic yards of biomass. With 6.6 yards per property, that would be 3 round trips to the landfill if the home or property owner was required to make that drive.

In 2010, Meeks Bay FPD's Neighborhood Fuels & Biomass Reduction Program, hauled over 8600 cubic yards of biomass. If the individual home and property owners had to do this on their own, with POV's, that could mean as many as 3800 round trips of 44 miles each, to legally dispose of biomass, required to be removed from their property, by code. In short, a total of 167,200 miles driven, equal to almost 8 trips around the Earth!

While slightly smaller than 2010, as mentioned earlier, our 2011 Program still made almost 500 "house calls," hauling over 6000 cubic yards. This amount, disposed of by home owners, would require 4400 one way trips of the same 22 miles, add up to an estimated 95,000 additional miles driven.

Our program, using a towed chipper, a 20 cubic yard dump truck, and a 10 yard dump trailer, towed by a 1 ton pickup, removed safely and efficiently, this amount of biomass. Further, our total distance traveled in 2011 was under 5,000 miles, to collect, sort and stage this material for repurposing and re-utilization.

There are also some additional program miles incurred, but not by our District's personnel or equipment, so they are not included here. These miles would be for the hauling of the "chip trailer" with approximately 100 cubic yards per trailer, to the Co-Gen plants. We do pay a fixed amount into the fund that pays for that collection and bulk transport, as part of our program, usually operated by Placer County. The proposal does show the costs we pay for this service, as part of our match funding.

We usually stage our collected chipped material at either Sugarpine Point State Park or Homewood Mountain Resort, while clean needles are sourced to Homewood for erosion control. Neither service, nor their locations, are available to the individual home or property owner. We use them under MOU's with their parent agencies.

ESTIMATED EMISSION REDUCTIONS/COST EFFECTIVENESS:

Useful Life of Project: As an ongoing biomass collection project, this request is for funding to cover one year of work in the time frame of 1 August 2012 thru 30 June 2013.

Total Lifetime Emissions Reduced: 248 pounds

Cost Effectiveness Per Pound: \$177 per pound (\$43,588 divided by 248 pounds gives this result)

Cost Effectiveness (total project costs): \$143,568

Cost Effectiveness (AQMD Funded project costs): \$43,588 (This year's requirement for 20% match...we could not figure out if this is to be added to this figure, so it can be deducted later, or not. The instructions were not clear. This is the actual cash amount we are requesting)

Hard Match Funding from MBFPD: \$13,030 (This is our actual hard match amount, which exceeds 20% of \$43,588)

Matching Soft Funding, MBFPD & Public: \$86,950

(Our total Match, both hard and soft, is \$99,980, or 164% of the cash amount requested)

We aren't sure if we have "done the math" property, in calculating this benefit to cost effectiveness out. We know each trip is 22 miles each way and a total of about 4400 one way trips are required to move the cubic yards of biomass estimated for this work period. This gives us about 95,000 total miles saved, after deducting those we drive in our program.

Using the Car/Van Pool Program at ARB.gov, I used these figures given as the default. I used 95,000 miles saved and 4400 one way trips of 22 miles each. That calculation produced this set of results.

VMT F	actor	COM. TRIP EN	D FACTOR
ROG	.390	ROG	1.478/trip
NOx	.486	NOx	.647/trip
PM10	.218		

REDU	CTIONS		COST EFFECTIVENESS
ROG	94 lbs	1.4	\$245.00 PER POUND
NOx	108 lbs		
PM10	46 lbs		
ROG 8	PM10	248 ibs	

These might be reasonably accurate...or not, given the variables in that program.

WORK STATEMENT:

The Meeks Bay Fire Protection District has had numerous years of success in procuring and administrating various grants, the largest being from the US Forest Service (\$600+K) for our various forest fuels and biomass reduction programs. Indeed, we have received multiple grants from EDCo./AQMD through AB2766 in the past. We've also received grants for other multi-jurisdictional projects and have completed them successfully, ultimately benefitting the public we serve, while being a good steward of the public monies granted to us, to complete this necessary work in the forests and communities around us.

We have great working relationships with our "customers," and are in constant communications with them via our newsletters, website, newspaper articles, social media and our 4th of July Community Pancake Breakfast. We are a "green" agency, and are sincerely interested in reducing both vehicle and environmental emissions as well as repurposing generated biomass. In fact, much of this proposal was completed at home via telecommuting, saving, almost a 40 mile round trip each day.

Our biomass collection program is run by a full time District employee, for which funding here is estimated at 144 hours of Time & Effort towards the 2012-13 AB2766. Our seasonal work crew, a crew boss and 2 to 3 crew members, usually start prepping our equipment in late May or early June. They will work until the end of October or early November, if weather allows.

Under the guidelines of last year's 2011/12 AB2766, and our requested extension, they would be under that grant funding until the total is used up, about the end of July. This RPF for the 2012/13 AB2766, if granted, would kick in upon final approvals, and run through 30 June of 2013. As a well established "machine", our Neighborhood Fuels & Biomass Reduction Crew has an excellent track record these past few years. We monitor their performance in the field and track the number and type of calls, in addition to the types and amounts of biomass generated by the public, that we pick up and re-utilize.

BUDGET SUMMARY SHEET:*

Description	AB2766 Funds	Match Funds	In-Kind Funds	Total Costs
1 Aug 2012 to 30 June Neighborhood Fuels & Biomass Removal Prog	2013 gram			
PERSONNEL HOURS	\$ 38,438			\$ 38,438
Material & Supplies	\$ 5,150			\$ 5,150
MBFPD Chipping & Bic Fair Value Lease (Dum 2 chippers plus all aux	mass Equipment p Truck, dump trailer, iliary equipment)		£ 54 200	£ 54 000
(04 WORK days at \$800/0	say)		\$ 51,200	\$ 51,200
District Oversight and				
Administration Chief/P	ayroll/HR	\$ 4,100		\$ 4,100
Field Office/Out-house	Phone/Computer	\$ 1,630		\$ 1,630
Acknowledgments &				
Program PR to home o	wners	\$ 2,800	\$ 2,000	\$ 4,800
Homeowners labor for biomass & prepping fo 450 parcels @ 5 hrs/pa	cutting r pick up rcel average			
times \$15 per hour valu	ied costs		\$ 33,750	\$ 33,750
Cost of				
Biomass Transfer Poin	t	\$ 4,500		\$ 4,500
TOTALS	\$ 43,588	\$ 13,030	\$ 86,950	\$ 143,568

*We are not sure that we created this Summary Sheet correctly, based on the request for 20% Share Match. The instructions in the RFP were unclear and somewhat confusing. For clarity, we have shown our actual Hard Match amount of \$13,030 and our Soft Match of \$86,950, separately.

BUDGET ITEMIZATION:

Personnel/Title	Hours	Salary	Bene/Burden	Total/Hr	Total Costs
Equipment Operator/					
Chipper & Biomass	960 hrs	\$17.00/hr	\$5.10	\$ 22.10	\$21,216
Crew Foreman	480 hrs	\$21.00/hr	\$6.30	\$ 27.30	\$13,104
Project Coordinator	144 hrs	\$22.00/hr	\$6.60	\$ 28.60	\$ 4,118
Material & Supplies					
Fuel Costs for 16 weeks \$	125 per wee	k average	for all Equipment		\$ 2,000
30 cu yd Dumpsters for two	"Green" Da	ays, 3 each	= 6 @ \$ 525.00		\$ 3,150
			TOTAL REQU	ESTED	\$ 43,588

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MATCHING FUNDS:

We have a very large available figure in our matching funds, both in hard and soft matches, based on our owned equipment and its' fair market rental value. As can be seen from the Summary, the District will provide over 20% in hard dollar matches, primarily in paying for the administrative side of handling this program. It is itemized and shown on the Exhibit Summary page and exceeds the required 20%.

And, remember, we are not asking for a "all or none" decision. Any amount will help. The various match percentages may change based on awarding of less than the full program request but, will always be at a reasonably high level combination of soft and hard match monies.

SCHEDULE OF DELIVERIES:

Activity	Lead	Timeline
Sign agreements with AQMD	MBFPD	1 st Week
Promote program usage within Community	MBFPD	on-going
Begin 2 nd part of Season of Chipping and Biomass pick up	MBFPD	1-10 Aug
Acknowledge AQMD & AB2766 Funding	MBFPD	on-going
Mileage/usage/scheduling monitoring	MBFPD	on-going
Grant and Fiscal Administration	MBFPD	on-going
Progress Reports to AQMD/EDCo	MBFPD	as req.

TRPA REVIEW:

The only specific TRPA regulation involves tree removal permits, but only when the tree is bigger than 14" diameter DBH and still alive. Proper permitting procedures, while the property owner removes biomass, to improve Defensible Space, will be observed. However, all work will be carried out in accordance with their Best Management Practices to minimize impacts on the environment. Under California regulation this project is CEQA Exempt.

END

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AQMD FY2012-13 under AB2766, taggart, 18Mar2012, ver: 3