

**State and Private Forestry
FY 2010 Western Competitive
Resource Allocation
Single-State Project Proposal**

| Filename | |
|----------------------------|------------------|
| 2010_CA_GSOB 9-28-09.doc | |
| Administration Information | |
| Dollar Amount Requested: | \$296,600 |
| Matching Share: | \$450,500 |

| Applicant Information | |
|-------------------------------|---|
| State Forestry Agency: | California Department of Forestry and Fire Protection |
| Contact Person: | Jeff Calvert |
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| Project Information | | | |
|--|---|---------------------------------|---|
| Descriptive Title of Project: | Interagency Response to a Rapid Oak Decline in Southern California | | |
| Names of Partnering Agencies / Organizations: | California Department of Forestry and Fire Protection County of San Diego US Forest Service (Forest Health Program) | | |
| State(s): | California | Congressional Districts: | Districts directly affected by project: 23,24,25,26,27,29,30,42,43,44,45,49, 50,51,52, 53. Disticts within project area: 28,31,32, 33,34,35,36, 37,38, 39, 40,41,46 ,47,48, |
| Counties: | San Diego (primary), Los Angeles, Orange, Riverside, San Bernardino, Ventura Counties, | Forest Service Regions: | Region 5 (California) |

| Total Leverage | | | | | | | |
|---|---|--------------------------|-----------|---|-----|-----|------------------|
| Please specify each 3 rd party contributor (partnering organizations and agencies, including other Federal) and the dollar value of each contribution. Please DO NOT show grant requested funds in this table. | | | | | | | |
| 3 | Contributors: (Please specify by name) | University of California | CALFIRE | | | | TOTAL |
| | Value of Contributions: | \$326,500 | \$124,000 | 0 | \$0 | \$0 | \$450,500 |

| Project Budget | | | | | |
|----------------|-------------------------------|-------------------|-----------------------------|------------------|------------------|
| | Grant Share (\$ requested) | Applicant | Non-Federal Contributors | TOTAL | |
| | | Cash ¹ | In-Kind ² | | |
| 4 | Personnel / Labor: | \$136,400 | \$190,000 | \$70,000 | \$396,400 |
| | Fringe Benefits: | \$24,000 | \$47,500 | \$17,000 | \$88,500 |
| | Travel: | \$45,000 | \$2,000 | \$2,000 | \$49,000 |
| | Equipment: | \$10,000 | \$15,000 | \$15,000 | \$40,000 |
| | Supplies: | \$20,000 | \$5,000 | \$5,000 | \$30,000 |
| | Contractual: | \$0 | \$0 | \$0 | \$ 0 |
| | Construction: | \$0 | \$0 | \$0 | \$ 0 |
| | Other: | \$0 | \$0 | \$0 | \$ 0 |
| | Indirect Costs: | \$61,200 | \$67,000 | \$15,000 | \$143,200 |
| | TOTAL: | \$296,600 | \$326,500 | \$124,000 | \$747,100 |

| Project Duration | |
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| 5 | What is the duration of this project? <input type="checkbox"/> One Year <input checked="" type="checkbox"/> Two Years <input type="checkbox"/> Three Years |

| National Relevance | |
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| 6 | Conserve Working Forest Landscapes <input type="checkbox"/> Protect Forests From Harm <input checked="" type="checkbox"/> Enhance Public Benefits From Trees and Forests <input type="checkbox"/> |

| Project Description | |
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| 7 | <p>Maximum 5500 Characters Including Spaces – Clearly summarize the proposed project, including goals, objectives, measurable outputs, outcomes, and how grant funds will be used towards successful completion of the project.</p> <p>An introduced beetle and new complex of pathogens is destroying oak woodlands in San Diego County. This rapid oak decline has spread over 75,000 acres of woodlands in the past five years (>5 km/yr), and has a higher rate of mortality (90% of trees infected for >5 years) than Sudden Oak Death (30 - 60% of infected individuals). Damage by the Gold-spotted Oak Borer (<i>Agilus coxalis</i>, GSOB) complex will likely exceed economic/ecological costs of the emerald ash borer (>7 billion dollars in Ohio alone), sudden oak death, or southern California bark-beetle outbreak (>100 million in removal costs). The focus of this project is to stop the movement of GSOB before it crosses the barrier of urban Los Angeles, and secondarily to prepare clientele for the damage caused by the GSOB complex in areas where we can not stop its advance. This request fits into the national priority of protecting forests from harm.</p> <p>We propose three tasks to stop the northern advance of the GSOB complex: (1) develop a focused outreach program to change the behavior of clientele groups currently moving oak wood (primarily firewood) from areas with GSOB infestation into new communities, (2) develop an electronic conduit to disseminate information on GSOB, and to collect and synthesize information on GSOB occurrence, (3) institute a program to train a group of professionals and volunteers to act as intermediaries to disseminate information about the GSOB outbreak to target audiences and</p> |

¹ 'Cash' is the value of any qualifying match the applicant pays for such as cash, staff time, supplies, or equipment.

² 'In-Kind' is the value of any qualifying match contributed by a non-federal 3rd party contributor such as donated time, supplies, or equipment.

the public at large.

Stop the Movement: Our primary task is to change the behavior of clientele groups currently moving oak wood (primarily firewood) from areas with GSOB infestation into new communities. This task involves finding (1) landowners who harvest (or allow harvesting of) their coast live oak and black oaks (for stumpage); (2) individuals cutting, transporting, and selling firewood and other raw oak-wood products; and (3) individuals purchasing or receiving these raw oak-wood products. We will use standard Cooperative Extension methods to contact and attempt to alter the behavior of the first and third clientele groups; but we will need to go into the field to find and engage wood cutters, who traditionally less tractable as a clientele group.

The measurable value of this task will be to stop Goldspotted Oak Borer in the southern Counties, before it spreads into the California coast ranges. If the gold spotted oak borer reaches the contiguous woodlands north of Los Angeles, it could potentially impact over 4 million acres of hardwoods in California, Oregon, and Washington. It has the potential to remove coast live oak (*Quercus agrifolia*) and black oak (*Q. kelloggii*) from a significant portion of their current distributions. Grant funding will be used to increase our capacity to print literature, create public service announcements (radio), press releases, and other mass media to land owners and homeowners. Additional funds would be used for student assistants and logistical support to find and work with woodcutters to utilize wood products without contributing to the spread of GSOB into uninfested areas.

Electronic conduit: The second task will utilize new technology to enhance the collection and dissemination of real time information on GSOB occurrence. We plan to use an electronic system of information exchange (e.g., UC Berkeley CNR Oakmapper©) to support the efforts to salvage and restoration of oak woodlands damaged by GSOB and Rapid Oak Decline by creating an information conduit between clientele in the field and woodland specialists. The system will be adapted from similar programs created by USDA Cooperative Extension staff for oak wilt (Texas) and SOD (Northern California); the contribution of our program is that we will attempt to make our system interactive, to reduce the time between observation and data posting, and to show the acreage and mortality rates in infected areas. Grant funds will be used to acquire a high speed server and appropriate software; to hire a part time communication coordinator; incidental technical support to maintain a website for information dissemination and data input. UC Cooperative Extension Master Gardeners' and Master Naturalists will accept and return calls from clientele, but call volume may require a more sophisticated phone system (used after 2007 wildfires). Measurable outputs of the conduit will be (1) data to reconstruct the spread of Rapid Oak Decline and make predictions about future patterns, and (2) public awareness to stop the movement of raw oak wood products.

Capacity to Respond: The third task will be to create a group of interested clientele who can assist in the discovery of new outbreaks of GSOB and Rapid Oak Decline. In coordination with USFS, University, or CALFIRE professionals, these individuals will increase the capacity of resource agencies to conduct outreach and search for GSOB in the oak woodlands of the seven counties of southern California. We plan to use these clientele in a manner similar to bird and botanical surveys created for the San Diego County (Unit 2007), and Oak Wilt in Texas (Kim Camili, CALFIRE Forester, pers.comm). A measurable output will be the number of individuals trained among different clientele groups. Grant funds would be used to augment the training conducted by University, USFS, and CALFIRE staff, including the cost of training handouts, educational packages, and venue for training sessions.

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| | <p>Maximum 1250 Characters Including Spaces</p> <p>Our project integrates with the national theme to Protect Forests from Harm, primarily protecting oak woodlands from GSOB and other diseases of oak decline. Additionally, this project is commensurate with the goals of the California Integrated Hardwood Range Management Program (IHRMP), and will take advantage of the twenty years this program has been in place in southern California. The IHRMP includes the California Department of Fish and Game, California Department of Forestry and Fire Protection, University of California. The potential loss of all oak woodlands has become a major concern of local park and preserve managers in Orange, San Diego, and Riverside Counties, and representatives from these organizations are included in our steering committee. The Resource Conservation Districts of San Diego, also a partner on our steering committee, has worked with landowners on issues of forest health improvement, and will join forces with our project to provide current information about landowner activities and attitudes in the outbreak areas.</p> |
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| 9 | Collaboration |
| | <p>Maximum 1250 Characters Including Spaces</p> <p>Federal, state, and local foresters formed an interagency steering committee to address Rapid Oak Decline in 2008, coordinating activities to maximize the impact in the absence of allocated funding. We have developed a Coordination Plan of outreach activities and efforts to identify the distribution of the outbreak. Our current level of integration has been enhanced by the Forest Area Safety Task Force (FAST) and Regional Area Safety Task Force (RAST). Our group is only a small part of the workload for many professionals; grant funds will be used to leverage greater dedication of personnel and integration. Grant funds will be used to build capacity among clientele groups to assume some training and information dissemination. The UCCE will continue to undertake outreach and applied research; USFS Forest Health Staff will continue to conduct administrative studies on GSOB and oak diseases in California, and CALFIRE staff will continue to provide field assistance in monitoring and management of dying oaks. Collaboration with counties will provide landowner identification and contact, and access/management in open space and park areas. Regulatory coordination by CDFA allows us to focus on voluntary changes in wood utilizations.</p> |

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| 10 | Leverage |
| | <p>Maximum 1250 Characters Including Spaces</p> <p>Most of our steering committee believe that this is one of the most significant problems facing southern California resource managers, and will work on this project, regardless of external funding. External funding for this project will, however, allow us to introduce the issue to other funding sources, including non-governmental organizations and foundations. The momentum of this funding will allow us to capture more of the professional time of individuals who have been loosely associated with our steering group. The funded activities in this project will be used to train professional groups, so they can assume the cost of instructing their members on GSOB issues. Finally the programs funded with this grant will allow us to train and manage more volunteers to address clientele needs for information on GSOB. This project builds educational capacity in the form of training the trainers, volunteers and public having a lasting impact on the inadvertent spread of GSOB</p> |

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| 11 | Meaningful Scale |
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Maximum 1250 Characters Including Spaces

Approximately one in every ten persons in the United States lives in communities that could be affected by GSOB damage to Coast Live Oak, Black Oak, and Interior Live Oak. GSOB damage to these oaks species has the potential to become the most costly forest health problem in California, Oregon, and Washington. In June 2009, GSOB was found in La Jolla, 20 miles west of its previously know locations. This jump in distribution could be replicated at any time by a delivery of infected cordwood to Los Angeles or Santa Barbara. Our best chance to stop the northern advance of GSOB and Rapid Oak Decline is to act as soon as possible. Coast Live Oak is a defining component of many communities in California, with tree values up to \$29,000 in landscaping. Even if we stop the movement GSOB, we will still need to salvage and restore woodlands across the current area of infestation.

Containing the problem to southern California will help prevent the spread of GSOB to northern California, Oregon and Washington.

Sphere of Influence

12 **Maximum 1250 Characters Including Spaces**

Our project will contribute to the understanding of other Agrilus beetle outbreaks across North America.. GSOB is one of 10 introduced species of Agrilus in North America, including *A. sulcicollis* (Lacordaire), the species responsible for large scale oak die-offs in Europe (Jendek and Grebennikov 2009). Unlike most of these species, GSOB was discovered early in its outbreak with a documented started point (Coleman and Seybold 2008). This allows us to collect data on GSOB spread that has not been available for species like the emerald ash borer (*Agrilus planipennis*), which may decimate ash species in the Midwestern US because it already occurs in 8 states (Poland and McCullough 2006).

The oak decline in our area appears to be unique in its rapid onset and expansion. Its potential causes (insects and pathogens), however, are similar to the causes of oak declines throughout North America. Information from our project may help manage unforeseen declines in these locations in the future. Finally the GSOB/Rapid Oak Decline may represent one of the first documented changes in oak species distributions as a result of global change and global commerce.

Sustainability of Outcomes

13 **Maximum 1250 Characters Including Spaces**

Our goal is to stop the advance of GSOB by changing patterns of oak wood utilization. We have three points of access (landowners, wood cutters, and wood purchasers) to affect wood movement. Wood cutters have proven to be unpredictable in past outreach programs; however, we are confident that the other two clientele groups will adopt long-term practices that prevent the transport of GSOB, if for no other reason than enlightened self-interest.