

Removal and Utilization of High Risk Sudden Oak Death Host Material

Progress Report 1 January 17, 2003

Period covered: June 1 to December 31, 2002

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UNIVERSITY OF CALIFORNIA
FOREST PRODUCTS LABORATORY

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Introduction

This progress report covers the period from June 1, 2002, the start date of the agreement, to December 31, 2002. Delays in the implementation of the funding delayed the start of project activity until September 2002. The project is designed to help facilitate the disposal and utilization of woody materials infected with the sudden oak death disease syndrome. It is designed as a Marin County pilot for the first year, expanding to multi-county effort in the second year. The project objectives are as follows.

- Establish a project management team with representation of the project partners, private enterprise, and public organizations to oversee the management of the project
- Develop protocols for the removal and transportation of SOD infected material
- Contract with biomass utilization facilities to install collection and processing facilities needed to prepare infected wood for further utilization. A minimum of two sites will be developed, one in Marin County and one in Monterey or Santa Cruz counties. Other sites may be developed as need is identified.
- Evaluate infected wood of each host species for utilization potential in a range of value-added products
- Identify best use(s) for infected wood and implement the distribution of it to appropriate markets in a sanitary manner.

The project is divided into four phases.

- **Phase I, Project Development**
 - Create a project management team to develop protocols coordinate tasks, oversee contractual efforts, and manage time frames
 - Identify personnel and implement contracts for operations management
 - Develop, identify, and rank on the basis of best use, all appropriate technologies and markets for SOD infected material
 - Develop protocols, based on best available science of disease spread for identifying appropriate materials for removal
 - Develop the infrastructure (collection yards, collection/processing/transport agreements, etc.) to carry out the operations phase (Phase III) of the project
- **Phase II, Outreach** – Create a communications plan to facilitate outreach to key audiences such as county personnel, landowners, resource managers, arborists/tree service companies, and other stakeholders. The communications plan would address the procedures necessary to effectively operate the collection sites and the dissemination of information on the procedures and protocols required to participate in the project
- **Phase III, Operations**
 - Implement the collection, processing, transport and utilization of SOD infected material within the infected counties, consistent with the guidelines developed in phase I.

- Summer/fall of 2002 – Contract with a company to set up a pilot collection/sort/pre-processing yard in Marin County
 - Spring/summer/fall of 2003 – Contract with company(s) to set up additional collection/sort/pre-processing yard(s) in regions identified as having large volumes of infected material targeted for sanitary removal. Most likely in Monterey and/or Santa Cruz county
 - Coordinate the transportation of infected material to appropriate markets
- **Phase IV, Utilization Research** – This phase is focused on the assessment of the opportunities and challenges of the complete range of utilization and disposal options. The goal is to determine the effect the disease has on wood quality, and determine the best use for the infected wood. Specific objectives include:
 - Measure benchmark physical and chemical properties of infected wood
 - Assessment of products compatible with the specific raw material properties
 - Periodically monitor processing activities to measure for the presence of viable forms of *Phytophthora* that could inadvertently spread the disease
 - Survey end-users of SOD infected material to gain knowledge of its value as a raw material.

Tasks Worked on During Report Period

All efforts during the period covered by this progress report were devoted to the first two phases, project development and outreach. A summary of the activities and tasks worked on during this period is presented below in Table 1.

Table 1. Update of Activities and Tasks

Activities and Tasks	Initiated	Completed	Expected Completion
Grant awarded to University of California Forest Products Lab		August 16, 2002	
Create project oversight and working committees	July 1, 2002	December 31, 2002	
Project Meetings Team Meetings		June 19, 2002 August 16, 2002 Nov. 26-27, 2002	
Marin County Govt Steering Committee		August 8, 2002 October 15, 2002 December 13, 2002	
Project Management Com.		December 16, 2002	
Contract with TSS Consultants for project coordination tasks	October 1, 2002	November 15, 2002	
Develop preliminary survey to determine how arborists handle SOD-infected material	November 20, 2002	December 6, 2002	

Field trip – visit organic recyclers and composters in Marin County		December 9, 2002	
Develop SODBusters web site	November 26, 2002		February 1, 2003
Present project information at SOD Science Symposium		Dec. 16-17, 2002	
Draft RFI (request for information) documents to solicit interest from potential operations contractors	December 15, 2002		February 1, 2003
Development of collection yard protocols	December 20, 2002		January 30, 2002
Selection of collection yard sub-contractors	December 10, 2002		February 28, 2002

Summary of Major Accomplishments

During this initial reporting period the oversight and working committees were confirmed and the initial meetings conducted. These meetings focused on providing information on the scope of the project, gathering support of local agencies and businesses, and the critique of the project work plan. Results of these meetings were used to refine the work plan and project timeline.

With the finalization of an agreement with TSS Consultants work was initiated in understanding the existing woody biomass waste and utilization streams in Marin County. Initial visits with the three largest operations in Marin County that accept this woody material suggest a basic understanding of the risks associated with the handling of SOD-infected plant materials but no attempt to document or segregate infected material. This observation was supported by the results of a survey of 36 arborists that have worked on SOD-infected trees. Of these, 16% mix the infected material with their other material but 19% isolate the infected material. Fifty percent take this material to a transfer station or landfill and 40 % leave it on the job site which implies that about 10% of the material may be going to a non-approved location or use. More study is needed to confirm these waste/use streams.

Based on this preliminary assessment it appears that the SOD-infected disposal/utilization stream consists of the following.

- Landfill
- Biomass fuel to power plants near Sacramento
- Firewood
- Compost used within the county
- Mulch used within the county

Work continues on gathering information on the existing protocols followed at the operations that are handling this material.

Appendix 1 – SODBusters Project Information Poster

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Disposal & Utilization of Sudden-Oak-Death-Infected Material: The SODBusters Project



What is SODBusters?

This is a two-year utilization project managed by the University of California Forest Products Laboratory (UCFPL) and funded by the USDA Forest Service and the California Department of Forestry. SODBusters will address collection, sorting, and processing of SOD infected material for research and utilization applications.

Project Development Phase:

Protocols, identify appropriate uses, infrastructure

(November 2002 – April 2003)

GOAL: Evaluate disposal options, potential uses, technical feasibility, and market potential



Infected hazard trees often need removal, especially in public spaces



Composting and combustion at biomass power plants are viable options if the risk of disease spread is manageable



GOAL: Develop protocols for selecting material for removal

Outreach Phase:
Inform public/private interests of objectives and participation guidelines (web, reports, media, etc.)
(November 2002 – February 2003)

What does SODBusters mean for you?

SODBusters hopes to provide recommendations on the safe removal, transport, and utilization of SOD-infected plant materials. This can affect everything from how green waste from private homes is sent for processing, to providing raw material for the forest product industry.



Tree and wood quality data are collected from uninfected and infected host trees

Research Phase:

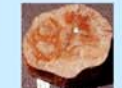
Measure wood properties, analyze product potential, monitor risk of disease spread, survey end users

(November 2002 – September 2003)

GOAL: Analyze the risk of using infected wood



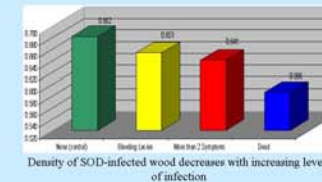
Stem wood from control tree (no SOD infection)



Stem wood from symptomatic SOD-infected tree



Stem wood from SOD-infected dead tree (note zone lines)



Density of SOD-infected wood decreases with increasing levels of infection

GOAL: Determine effect of SOD on wood quality



Current methods of collecting and sorting green waste are not sufficient to address SOD-infected material

GOAL: Set up collection and processing facilities to demonstrate acceptable disposal and utilization methods

Operations Phase:
Competitive contracts, coordinate collection, processing, transportation

(January 2003 – September 2003)



GOAL: Facilitate the removal of infected material

For more information, please contact:

John Shelly, UC Forest Products Lab: john.shelly@ucop.edu
Janice Alexander, Marin UC Cooperative Extension: jalexander@ucdavis.edu
Tad Mason, TSS Consultants: tmason@tssconsultants.com

Appendix 2 – Monthly Update Report from the Project Coordinator

SODBusters Project Monthly Update # 1

Date: December 2, 2002

Report Period: October 15, 2002 through November 30, 2002

Author: Tad Mason, SODBuster Project Coordinator

Project Status:

- Conducted initial SODBusters Management Team meeting – 10/15/02.
- Started review of Marin County green waste flow.
- Set agendas for Steering Com meeting on 12/13/02 and Management Team meeting on 12/16/02 (attached).
- Started informal discussions with Steve Swain (UC Berkeley) regarding SOD compost research projects being conducted by Matteo Garbelotto (ESPM).

Other progress:

- Began SODBuster web site design.
- Completed Steering Com and Management Team committee structure and participants list (attached).

Challenges: None

Opportunities: The UC Richmond Field station (location of UCFPL) has a site that would work well for compost research. Hope to coordinate closely with UCB lab staff on research initiated by Matteo Garbelotto.

Highlights of Projected Activities in the next thirty days:

- Continue to complete tasks as outlined in Plan of Work (attached).

Attachments:

- Current Plan of Work (Dec, 2002 version).
- Agendas for upcoming Steering Com and Management Team meetings.
- Steering Com and Management Team structure and participants list.
- Notes from 10/15 Management Team meeting.

Funding for this project is provided by Region 5, USDA Forest Service, and the California Department of Forestry and Fire Protection

Appendix 3 – Project Committee and Team Structure

Project Team:

Principal Investigator

John Shelly, PhD

University of California Forest Products Laboratory

Project Coordinator

Tad Mason

TSS Consultants

Team Members

Kati Jackovics, University of California Forest Products Lab

Ramnik Singh, University of California Forest Products Lab

Janice Alexander, UC Cooperative Extension, Marin County

STEERING COMMITTEE

- PRIMARY OBJECTIVES:
 - Provide oversight and direction.
 - Assist with outreach efforts.
 - Provide feedback regarding management techniques, sanitary collection/processing/utilization methods, etc.
 - Provide data/information on latest SOD related research findings.
- MEETING SCHEDULE:
 - 2 to 3 times/year or as needed – most via conference call.
- OTHER:
 - Primary networking tool - monthly progress reports.
 - Secondary networking tool – SODBusters web site.
 - All internal correspondence will be via email.
 - Principal Investigator (or designated PI representative) will coordinate meetings, progress reports, etc.

MEMBERSHIP LIST

NAME

Ellen Rilla
Kent Julin
Mark Stanley
Rick Standiford
Cynthia Murray
 Alternate – Grace Schmidt
Steve Kinsey
 Alternate –Liza Crosse
Dan Weldon
Jack Marshall
David Bischel or Phil Aune
Mike Swezy
Ron Paolini
Susan Frankel
Ernest Culver
Stacy Carlsen
Lucia Briggs
Ron Kole
Katie Facino
Stephen Jones
 Alternate – Jess Rios

ORGANIZATION

Director, UCCE Marin County
Marin County Fire, Fire Safe Marin
Chair, COMTF
COMTF Research Committee
Supervisor, Marin County
Administrative Aide, Marin County
Supervisor, Marin County
Administrative Aide, Marin County
Executive Director, Forest Landowners of California
Co-Chair, COMTF, Management Committee
California Forestry Association
Forester, Marin Municipal Water District
Marin County Parks & Landscape Deputy Director
Plant Pathologist, USDA Forest Service, COMTF
Principle Administration Analyst, Marin County
Agriculture Commissioner, Marin County
COMTF State Coordinator
Public Information Officer, Marin County
Public Affairs Officer, COMTF
California Dept of Forestry and Fire Protection
California Dept of Forestry and Fire Protection

PROJECT MANAGEMENT TEAM

- PRIMARY OBJECTIVES:
 - Assist in the development of implementation protocols.
 - Monitor project Plan of Work to assure timely delivery of services.
 - Assist with delegation/coordination of tasks.
 - Provide detailed/active oversight and direction.
 - Assist with outreach efforts.
 - Provide feedback regarding management techniques, sanitary collection/processing/utilization methods, etc.
 - Provide data/information on latest SOD related regulatory efforts.
 - Assist with various tasks – review of proposals from collection/sort yard contractors, review of methodology/protocols, etc.
- MEETING SCHEDULE:
 - Once monthly or as needed – most via conference call.
- OTHER:
 - Primary networking tool - monthly progress reports.
 - Secondary networking tool – SODBusters web site.
 - All internal correspondence will be via email.
 - Principal Investigator (or designated PI representative) will coordinate meetings, progress reports, etc.

MEMBERSHIP LIST

NAME

ORGANIZATION

Don Gasser	PG+E, Co-Chair COMTF Biomass Util Com.,ISA and Norcal SAF rep.
Janice Alexander	UCCE Marin; Northern SOD Regional Coordinator
Steve Swain	Research Associate, UC Division of Ecosystem Science
Nick Condos	CA Dept of Food and Ag
Susan Frankel	USDA Forest Service, COMTF
Stephen Jones	California Dept of Forestry and Fire Protection
Tad Jacobs	President, Tree Masters
Karl Buermeyer	UCCE Santa Cruz; Southern SOD Regional Coordinator
Mike Swezy	Marin Water District
Jeff Creque	Golden Bear Land & Water
Dan Hamon	USDA, Animal Plant and Health Inspection Service
Jess Rios	California Dept of Forestry and Fire Protection
Mark Janofsky	Environmental Health Specialist, Marin County
Will Bakx	California Compost Quality Council
Fred Crowder	Deputy Agriculture Commissioner, Marin County
Sean Edgar	California Refuse Removal Council
Pat Paswater	California Integrated Waste Management Board
Stephen Jones	California Dept of Forestry and Fire Protection
Alternate – Jess Rios	California Dept of Forestry and Fire Protection