



Midpeninsula Regional  
Open Space District

R-16-17  
Meeting 16-04  
February 24, 2016

## AGENDA ITEM 5

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Award of Contract for Research on Sudden Oak Death Preventative Methods and Root Diseases

### GENERAL MANAGER'S RECOMMENDATION

Authorize the General Manager to enter into a contract with Phytosphere Research for a not to exceed amount of \$76,500 for monitoring of treatment methods to suppress the spread of Sudden Oak Death in Open Space Preserves, assisting native plant nurseries in developing clean propagation practices, and inspecting prior planting sites in Open Space Preserves.

### SUMMARY

The Board of Directors approved a ten-year work plan for Sudden Oak Death (SOD) management and research on February 10, 2016 (R-16-06). This agreement with Phytosphere Research will provide three years of continued SOD research and assistance in responding to exotic diseases in District Open Space Preserves. A recently identified pathogen is infecting native plant nurseries and has been found infecting restoration sites throughout the state. This contract for services includes surveys of prior planting sites on District lands to detect if this pathogen is present.

### DISCUSSION

SOD, a plant disease caused by the fungus-like pathogen *Phytophthora ramorum*, is responsible for killing millions of oaks and tanoaks throughout California's forests and District Preserves. New related diseases were discovered in California's native plant nurseries last year and the effects on District preserves are being evaluated.

Drs. Ted Swiecki and Elizabeth Bernhardt with Phytosphere Research have been working with the District since 2007 to assess the status of SOD in District preserves and to monitor two preventative treatment methods: removal of bay trees in the vicinity of oak and tanoak trees and annual application of a fungicide that helps oaks and tanoaks resist SOD infection if applied early enough. On a preliminary basis, the results of the research on these treatment methods indicates that 1) bay removal treatment may be effective, and 2) fungicide treatment may not provide enough protection for the level of effort expended. However, it will be necessary to continue the treatment methods and science-based monitoring for several wet years in order to determine if these preventative treatment methods are effective because recent SOD disease pressure has been low (due to low rainfall since 2011), delaying the spread of the disease statewide.

Additional exotic plant diseases that are caused by other non-native species of *Phytophthora* have recently been identified in native plant nurseries in California. These pathogens infect the roots and soil of nursery grown plants which then can be introduced to restoration sites through installation of infected nursery stock and can spread farther into adjacent natural areas. The long-term effect of these unintended introductions of plant diseases into developed landscapes and wildlands throughout the state are currently unknown. A wide range of native California forest and brush plants are known to be susceptible to these root diseases and preliminary investigations have found numerous plants (including three rare species) dying at restoration sites where the root pathogen has spread into adjacent undisturbed natural areas.

In response, the District cancelled all plant orders for one year and is working with its main nursery to provide disease-free plants for future projects. Additionally, all restoration planting sites in the preserves will be surveyed to determine if they have been contaminated and if any responses are warranted. Management of these root diseases has been added to the SOD program because they are related plant diseases that could substantially affect the health of forests on District preserves.

Phytosphere Research has been recommended as sole source consultant to conduct this research because of their unique expertise in *Phytophthoras* in natural areas and nursery environments and because of their past satisfactory work for the District on this research.

Staff recommends entering into an agreement with Phytosphere Research to continue monitoring of preventative treatment methods to suppress the spread of Sudden Oak Death in open space preserves, to develop an assay for testing clean propagation practices in native plant nurseries, and to inspect prior planting sites in District preserves for a total not-to exceed amount of \$76,500.00.

**FISCAL IMPACT**

The \$76,500 in services awarded under this agreement will be for three years of work and is projected to be expended as detailed below:

<b>Fiscal Year</b>	<b>Funds</b>	<b>Services</b>
FY2015-16	\$10,000	Research SOD preventative treatments; Inspect planting sites for root pathogen at Monte Bello and Skyline Ridge OSP; Develop quick assay for nursery plants
FY2016-17	\$26,500	Same as previous
FY2017-18	\$40,000	Inspect Planting Sites for Root Pathogen throughout District; Research SOD preventative treatments.
<b>TOTAL</b>	<b>\$76,500</b>	

The \$10,000 for FY2015-16 outlined above has been included in the FY2015-16 Natural Resources Department budget for continued SOD research. The \$26,500 for FY2016-17 and the \$40,000 for FY2017-18 outlined above will be requested in those future fiscal year budgets to continue the services outlined in this report.

Since 2008, Phytosphere Research has received \$97,150 in funds from the District for SOD Research and has been granted an additional \$163,575 from the US Forest Service to support this

research. US Forest Service grant funds may be available on a year-to-year basis to match District expenditures.

### **BOARD COMMITTEE REVIEW**

The full Board of Directors reviewed the Sudden Oak Death 10-Year work program during the meeting of February 10, 2016.

### **PUBLIC NOTICE**

Public notice was provided as required by the Brown Act. Additional public notices were sent to the Resource Management and Sudden Oak Death contact lists.

### **CEQA COMPLIANCE**

SOD research and treatment actions are included in the Final Environmental Impact Report for the Integrated Pest Management Program approved by the Board on December 10, 2014 (R-14-148). Any new activities associated with SOD or new nursery diseases will be evaluated to determine if additional environmental review is required.

### **NEXT STEPS**

If approved for award of contract, Phytosphere Research will continue monitoring SOD preventative treatments until research results are reliable under wet weather conditions, and will proceed with nursery and restoration site testing regarding root diseases.

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