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Department of Agriculture

Forest Service

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Subject: Biological Evaluation of BLM-King Range Proposal for FPM
Suppression/Prevention Funds for Stream Monitoring (FHP Rept. No. N07-01)

To: Greg Jennings, Bureau of Land Management, Arcata Field Office

Last week, I received a phone call from Greg Jennings, of the BLM Arcata Field Office, in which he informed me that he had submitted a Forest Health Protection Prevention/Prevention project proposal and needed a biological evaluation for the proposal package. This Tuesday, I received a copy of the proposal from Ralph Thier (Entomologist, Forest Health Protection Washington Office), via Julie Lydick (Assistant Director Of State and Private Forestry, Pacific Southwest Region). Yesterday, I had the opportunity to talk with Greg on the phone and get more details regarding the proposal.

The proposal is for funds to cover some of the costs associated with monitoring streams for *Phytophthora ramorum*, the causal agent of Sudden Oak Death, at the King Range National Conservation Area. The King Range National Conservation Area is located along the northern California coast, in northern Mendocino and southern Humboldt counties. At the present time, *P. ramorum* has not been found on the King Range National Conservation Area. However, the King Range is only 10-20 miles west of the Redway/Garberville area, which is home to the northernmost known *P. ramorum* infestation in California. With abundant *P. ramorum* hosts (including tanoak, California bay laurel, rhododendron, Douglas-fir, coast redwood, huckleberry and many others), and location along the coast with most of the area at an elevation less than 2,000 feet, there is ample reason for concern regarding introduction of the pathogen to the King Range. This concern is confirmed by the risk studies conducted by Dr Ross Meentemeyer, who has used a combination of host frequency and environmental factors to map Sudden Oak Death spread risk over most of California. According to the risk maps that cover the King Range, most of the of the area is at moderate to very high Sudden Oak Death spread risk, with large amounts at high to very high risk.

In 2006, the BLM started a program of stream monitoring at the King Range National Conservation Area, in cooperation with the University of California Cooperative Extension. They need additional funds to continue. Current monitoring takes place at five locations in the Mattole River watershed, covering the west slope of the King Range to the Pacific Ocean (see attached map). With \$14,000 in FPM Prevention/Suppression funds for 2007, the BLM proposes to continue this monitoring, which provides pathogen detection for an area of approximately 20,000 acres. As with the first year of monitoring (2006), technical and logistical support for the



implementation and sample analysis will be provided by Chris Lee and Yana Valochovic of the UC Cooperative Extension office in Eureka.

Stream monitoring is the most effective and least costly method of directly monitoring large acreages for *Phytophthora ramorum*. Aerial surveys for oak mortality are conducted annually by the USDA Forest Service, Forest Health Protection. Ground-based monitoring is done by BLM staff as well. Early detection of *P. ramorum* or Sudden Oak Death mortality, by either aerial survey, ground or stream monitoring, can allow management responses, including eradication attempts and the application of various “slow-the-spread” techniques, to be done while the pathogen is in the early stages of establishment, increasing the chances for success and reducing treatment costs. Approximately 70 streams and watersheds throughout the California coast are currently being monitored as a part of a network that has been established by various state and federal agencies, as well as several Indian tribes, in cooperation with the University of California Cooperative Extension. Stream monitoring is done by placing Rhododendron leaf baits in strategic stream locations within the target watershed for 7-21 days, collecting them, then testing them for the presence of the Sudden Oak Death pathogen.

I support the efforts of the BLM to monitor the King Range National Conservation Area for *P. ramorum* and support their Forest Pest Management Suppression/Prevention proposal. At \$14,000, the cost of the monitoring is inexpensive, particularly when compared to the cost of mounting a management effort after the pathogen is well established. It follows well-established methodology, is well integrated with the current stream monitoring network in California, and augments the other efforts for early detection. In addition, the project fits well with the stated aims of the Region 5 Forest Health Protection unit’s recently completed Sudden Oak Death Program Strategy, which places high priority on projects that support early pathogen detection in high risk areas that are located outside of the current range of infestation.

Please feel free to call if you have any questions or would like to discuss my recommendation on this FPM Suppression/Prevention project proposal.

PETE ANGWIN
Plant Pathologist
Forest Health Protection
Northern California Shared Service Area

cc: Julie Lydick, Phil Cannon, Ralph Their, Lisa Fischer, Dave Schultz

King Range National Conservation Area Sudden Oak Death Water Trapping Sites

