United States Department of Agriculture
Forest Service
Northern California Shared Service Area
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File Code: 3420 **Date:** June 11, 1999
Route To:
Subject: Evaluation of POC Root Disease at Fish Lake/Blue Lake (FPM Rept. N99-3)
To: Forest Supervisor, Six Rivers NF

On April 30, 1999, Dave Schultz, Entomologist, John Kliejunas, Pathologist, and I met at Fish Lake Campground with Orleans/Ukonom Ranger District and Six Rivers National Forest personnel to look at the current status of Port-Orford-cedar root disease management activities at Fish Lake Campground. We were joined by Don Rose, Jon Martin, Bill Jones, Tom Jimerson, Julie Ranieri, Harold Slate and Jean Hawthorne.

A number of concerns had been raised regarding the risk of opening Fish Lake Campground over the Memorial Day weekend. FS Road 10N51 to Fish Lake is now closed during the wet season, from approximately November 1 to May 15. This closure is designed to limit the possibility of vehicles or people picking up infested soil and moving it to other drainages. Weather this May was generally wet and many of the proposed mitigation measures listed in the Fish Lake Port-Orford-cedar Root Disease Prevention Project decision memo are not yet in place. The decision memo, signed on Sept. 30, 1998 by Orleans/Ukonom District Ranger Jon Martin, gave the go-ahead to implement a variety of root disease mitigation measures, including the implementation of a program of public education, interpretation and signing, installation of gates, road improvements and closures, trail re-routing and improvement, improvement of the boat ramp, and removal of Port-Orford-cedars to reduce disease spread from the infested lakeside to upland areas. In addition to questions regarding the Memorial Day opening of the campground, questions had been raised regarding whether the proposed mitigation measures are sufficient to address potential disease spread out of the Fish Lake area.

During our brief visit to the area, the group walked around Fish Lake along the Fish Lake Trail and FS Road 10N51, walked from the Blue Lake Trailhead to Blue Lake, and down the Blue Lake Trail to Fish Lake Creek. Conditions around the lakes were generally dry, though several wet spots from poor natural drainage were noted along the Fish Lake Trail and near the creeks and watercourses that lead to Fish Lake. It is evident that the disease is continuing to spread and intensify near the Blue Lake Trailhead, along Fish Lake Creek between Road 13N01 and Fish Lake, and around Fish Lake. Numerous dead cedars were noted in all these areas, particularly near areas of slow-moving water and near some of the small creeks and tributaries that lead into Fish Lake. However, dead cedars were not noted in the campground itself. Regardless of our management efforts, it is almost certain that most of the cedars in these areas will eventually be killed. Management efforts must therefore concentrate on delaying the spread of the disease out of the Fish Lake/Blue Lake area, protecting nearby uninfested areas.

Because of the overall dry conditions in the area, the decision was made to move forward with plans to open Fish Lake Campground for the season on Memorial Day weekend. Additional mitigation measures were identified as follows:

- Install a split-rail fence at the Blue Lake trailhead to keep people on the trail. Obliterate the campsite at the trailhead and install more signs (No Camping, more POC information signs).
- Place more rock in wet areas on the trail to Blue Lake. The road to Blue Lake will remain

closed at the Fish Lake intersection until the above mitigations are complete.

- Rock the boat ramp parking area and install a small culvert as part of the contract to install a boat ramp. Remove cedars (all sizes) near the boat ramp and boat ramp parking area.
- Keep the loop road closed at both ends for the entire season. Severely limit administrative use of this road- principally to access water system only. Place gravel in wet areas on the road. Place boulders along the road to eliminate vehicle access to dispersed camp sites.
- Reroute the trail around the Fish Lake in a couple of small sections (high priority). Install bridge at Bridge Site #3 (high priority) and replace several other bridges (lower priority).
- Place boulders on several Fish Lake spur roads to block vehicle access.
- Improve signing- more POC information signs, better placement of signs, more motorized vehicle closure signs and signs restricting all wheeled vehicles to paved or gravelled areas.
- Consider rerouting the upper section of the Blue Lake Trail (from the Blue Lake trailhead to Fish Lake Creek) to the south of Fish Lake Creek so that the trail avoids Fish Lake Creek.

The priority of need for each of these measures (with regard to the root disease) varies. Of particular importance are measures that are designed to keep vehicles from picking up and transporting spore-containing organic matter in mud from infested areas around the lake. The current seasonal road closures have probably already done much to help prevent this spread, and the additional closures listed above will do more. Since less mud is picked up by foot traffic, and what is picked up is less likely to be deposited into an new potential disease site, the trail improvement measures are somewhat less critical. Likewise, at the present time there is very little Port-Orford-cedar near the boat ramp, and the few that are near appear healthy. It is thus unlikely that disease spores from surrounding cedars will be transported from that site in the near future. Likewise, the chance of infested organic matter being carried downstream, settling in the mud, and being picked up by someone at the boat ramp in sufficient quantity to spread the disease is remote. Removal of the remaining Port-Orford-cedar near the boat ramp, can help keep locally-produced spores from being introduced to the area and the paving of the boat ramp that is scheduled to take place this summer will be an effective (though expensive) way of keeping mud from being transported out of the area.

In conclusion, while it is evident that we are well on the way toward developing the mitigation measures that will do the best possible job of restricting the spread of Port-Orford-cedar root disease to other drainage systems in the Klamath River, much more needs to be done. It should be recognized that although we will never be able to completely halt the spread of the disease, we can slow the spread to adjacent watersheds. One effort that would be helpful would be to conduct a detailed risk assessment to continue to identify general and site-specific, short and long-term concerns, and the potential measures to address them. In addition to addressing risks and potential mitigation measures, the assessment should also prioritize the proposed measures so that the greatest impacts may be obtained in the most strategic and cost-effective way possible. This effort should involve Forest Pest Management, Timber, Engineering, and Recreation staffs.

An additional concern that has come up since our visit to the campground is the fact that it would be administratively difficult for the Orleans/Ukonom District to close Fish Lake Campground if unusually wet weather occurs during the camping season. Since the potential for the disease to be

spread under these conditions would be high, it is important that the District be ready and able to address such a situation. Another measure that was suggested in 1996 by my predecessor, Gregg DeNitto, was to consider the removal of Port-Orford-cedar along Road 13N01 at the Fish Lake Creek stream crossing (where the disease was first introduced). This measure would reduce further production of inoculum that could be picked up by vehicles and transported out of the area. Similarly, the removal of Port-Orford-cedars at other strategically selected, high risk locations along Road 13N01, to lessen the chance of infesting other drainages, could be considered. The proposed risk assessment should identify such locations (for example, wet, poorly drained places with Port-Orford-cedar where vehicles stop and people congregate).

If you have any further questions regarding the observations in this report, feel free to contact me. As always, I am available to assist the Forest and District in any way possible.

/s/ Pete Angwin
Pathologist
Forest Pest Management

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