

Part II: Fighting the blaze in the Kenai National Wildlife Refuge's Mystery Hills

by Doug Newbould

Editor's note: This is the second part of the Refuge Notebook article that appeared in the Outdoors section last Friday.

In last week's column, I wrote about the events of June 28, 2001, when two lightning strikes ignited separate wildfires on the western slope of the Kenai Mountains, in the area of the Kenai National Wildlife Refuge known as the Mystery Hills.

As I pick up the story again, the time was about 6:15 p.m., I had just arrived at the Kenai-Kodiak Area Office of the Alaska Division of Forestry in Soldotna, and the initial size-up reports from the helicopter reconnaissance mission were just coming in over the radio.

As I walked into the fire management office I could feel the excitement as firefighters moved briskly about, gathering equipment and making final preparations as they waited for the order to respond to the wildfires on the refuge. But before orders could be given, I needed to meet with Ric Plate, the fire management officer for the Division of Forestry.

For the next 10 or 15 minutes, we assembled all of the available information about the two fires and their respective environments. We assessed the life safety hazards and the values at risk. We considered the fire weather, the fuel types in and adjacent to the fires, and the fire behavior. We discussed the availability of local wildland firefighting resources, considering the close proximity of the Kenai Lake Fire on the Chugach National Forest, about 30 miles east of our fires.

Finally, after consulting with our superiors, we made the decision to initially attack the Mystery Hills Fire with helicopters and retardant ships during this first burning period. Concurrently, we decided not to suppress the Thurman Creek Fire, but to monitor its progress from the air and reassess the situation in the morning.

Some of the factors we considered in making our decision to suppress the Mystery Hills Fire included: the fire's proximity to powerlines, to the Sterling Highway, to the Skilak Lake recreation area and to an unknown number of recreationists in the vicinity; the

large tracts of continuous black spruce forests to the south and west of the fire; and considering the extreme fire danger resulting from the drought conditions in the region, the potential for the fire to get very large in a short period of time if no suppression actions were taken.

Once the decision was made to suppress the fire, additional air attack resources were immediately ordered, including a second helicopter with a water bucket and a state air tanker. We also agreed that no ground forces would be sent into the fire until we could provide adequate escape routes and safety zones. That evening we would have to settle for an air attack, and the next day we would reassess the situation and develop a new plan of attack.

Friday morning, because of our decision to suppress the Mystery Hills Fire and because of the fire's potential to exceed the capabilities of our local resources, Ric and I completed what's known in fire circles as a "woofsah," or WFSAs, an acronym for Wildland Fire Situation Analysis.

A WFSAs is a standardized tool used by fire managers nationwide to document critical information about a wildfire incident and to help fire managers develop a management plan for the incident. A WFSAs is a "living document" that is adjusted as new information is collected or to meet any new challenges as the incident changes. In hindsight, this was an important exercise for me and Ric, since it was our first "project fire" working together as fire management officers.

While Ric and I completed the WFSAs, the aerial fire-suppression efforts continued on the Mystery Hills Fire. The Thurman Creek Fire continued to be monitored from the air; but its position, the surrounding fuels and its behavior were such that no suppression efforts were deemed necessary at the time. An Extended Attack Incident Commander (ICT3) from state Forestry in Palmer supervised the suppression efforts that day. By the end of the day, Mystery Hills had grown to about 600 acres and Thurman Creek covered about 10 acres. Because Mystery Hills continued to grow, and the weather forecasts gave us little hope for

a change, we decided to order a Type 2 Incident Management Team to help us manage the Mystery Hills fires.

Fortunately for us, the Division of Forestry had already ordered a Type 2 team to be pre-positioned or staged in Anchorage. This saved us at least a couple of days in getting the incident management team to the Kenai Peninsula. As it turned out, this was the second of three fortuitous circumstances that allowed us to bring the Mystery Hills Fire under control. The first was the aerial retardant lines that were laid down on Thursday and Friday—in front of the advancing fire fronts on the south and west flanks. Ultimately, these lines were what kept the fire from reaching the Sterling Highway and Mystery Creek Road.

Forestry fire managers deserve a lot of credit for pre-positioning a retardant ship in Homer these last two years and developing a retardant-loading site at the Kenai Airport.

The third fortunate circumstance was the favorable weather change that occurred on July 4. By the time the incident management team from Oregon/California (also known as the ORCA team) was set up and fully functional at the Sterling Elementary ICP (incident command post), the cooler/wetter weather that is typical of mid- to late July finally arrived.

This allowed us to change our fire-suppression tactics from a defensive indirect attack to an offensive direct attack. In other words, we were able to safely send firefighters into the fire to construct handlines and direct attack the fire's edge. By Saturday, Hotshot crews from Alaska and the Northwest had the fire contained and well under control.

Having flown over the fire a couple of times, after walking completely around its perimeter, and after studying the satellite imagery provided by the borough's Spruce Bark Beetle Office, I noticed a very interesting pattern—one that I think deserves our attention in the years ahead. The Mystery Hills Fire burned

the same fuels and followed the same pattern as the 1947 Fire, which burned more than 300,000 acres.

The Mystery Hills Fire burned most actively in the black spruce woodlands that regenerated after the '47 Fire. This fuel type dominates the drier upland ridges in the Mystery Hills and throughout the western foothills of the Kenai Mountains.

When the fire burned into the decadent remnant stands or stringers of beetle-killed white spruce, it tended to go out on its own. These white spruce stands exist in the wetter sites found in the valley bottoms and at higher elevations (about 1,200 feet). In fact, at several locations within the fire perimeter, the fire clearly jumped across these wet stringers of white spruce even with all that large dead woody material lying around, and burned the adjacent dry ridges of 50-year-old black spruce.

There are at least two inferences we can derive from this information: that the black spruce woodlands regenerated by the 1947 Fire are once again capable of sustaining wildland fire, and that wetlands—even those dominated by old or beetle-killed white spruce, can withstand the effects of an intense wild-fire in some situations.

I thought it would be useful to tell you my story about last year's Mystery Hills fires now, because another wildfire season is almost upon us. Have you taken the steps necessary to be FireWise and protect your family and home from the devastating effects of a wildfire?

For more information about the FireWise Community Action Program and how to be prepared, contact me at the refuge, 262-7021, or call the Division of Forestry at 262-4124.

Doug Newbould is the fire management officer at the Kenai National Wildlife Refuge. Previous Refuge Notebook columns can be viewed on the Web at <http://kenai.fws.gov>.