

NEWS RELEASE

USDA Forest Service -- Northern Region



September 21, 2000
News Contact: Maggie Pittman
(406) 329-3091
FOR IMMEDIATE RELEASE

Fire Recharges Native Fisheries

The second in a special series by Deborah Ritchie-Oberbillig

On August 28, the Alder Creek Fire raced toward Rock Creek--a revered blue ribbon trout stream east of Missoula. About a month earlier, the Crooked Fork Fire near Lolo Pass seared the home of spring chinook salmon. Ranchers reported seeing dead fish in the creeks within the Toston fire south of Helena. Are fisheries going belly up from the summer's wildland fires? Far from it. Fishery biologists have just one word for native fisheries when it comes to fire--resilient. Even when wildland fires burn hot, the resulting fish kills--like fire intensity--tend to be patchy. Often, adult cutthroat trout may miss a fire in a home tributary altogether as they mature for a couple of years in main river systems before returning to spawn in the spring. What they find is a stream much richer in insects and aquatic life, thanks to the addition of nature's fertilizers--ash and nutrients from the burned trees that topple into the waters.

While the rosy prediction for native fish appears consistent across the fires in the Northern Rockies, there will be individual differences. A brief look at this year's fires in the Lochsa, Bitterroot and Blackfoot River drainages points to the importance of maintaining cold, clear streams and connections between them for migratory fish passage. By connections, biologists refer to the ability of fish to move from stream to stream without blockages like dams, diversions or lack of water. In connected systems, fish can recolonize burned streams as they have for thousands of years.

The smoke had yet to clear on August 21 when Pat Murphy, fisheries biologist on the Clearwater National Forest, joined a hydrologist and soil scientist to hike the Crooked Fork of the Lochsa River in Idaho after fire burned in a tributary that harbors spawning spring chinook, as well as steelhead, westslope cutthroat and bull trout.

"Its looking good," Murphy reported. "The fire burned into the riparian area in places but mostly it was an understory burn and no trees were killed."

The wildland fire crackled through subalpine fir and spruce in the high country and into lush, cedar and larch country lower down. Murphy expects trees to fall into the creek and add to the woody debris that a healthy stream demands.

Past logging in the drainage could be a concern as the Forest Service monitors the fire's effects. Murphy and others will keep an eye on the old logging roads that the fire may have re-exposed in case they need to take measures to prevent mass erosion.

Mike Jakober, fisheries biologist on the West Fork Ranger District of the Bitterroot National Forest, counted fish in Laird Creek soon after fire on August 6th swept through the drainage (on the west side of section, the count tallied only five cutthroat, indicating about a 90 percent fish kill. Further up Laird Creek, the fire had crept across the canyon and even skipped areas of stream altogether. There, the electrofishing technique revealed juvenile bull trout and cutthroat in normal abundance.

"When stream temperatures get up to about 80 degrees, fish do start to die," Jakober said. However, he pointed out that those temperature rises rarely affect the entire stream and not all aquatic life. "In the charred section of Laird Creek, we turned over rocks and found insects," he said. "We saw a fair number of garter snakes, western toads and spotted frogs."

Chris Clancy, fisheries biologist for Montana Department of Fish, Wildlife and Parks, has monitored fish populations in the Bitterroot Valley since 1989. He considers the short-term effects of fires on fish as fairly inconsequential compared to the continuous impacts from dewatering, channelization, diversions and other pressures in a rapidly growing area.

"It's too soon to know, but the small population of bull trout in the upper reaches of Rye Creek may have suffered if the fire burned hot, since some of the streams no longer connect with one another," he said. However, he predicts good news for the native fishery within the roadless country of the upper East Fork of the Bitterroot River, where the Mussigbrod fire burned. "We look at these burned streams with human eyes and they're not pretty at first," Clancy said. "In the long-term, the fires can be very beneficial."

The 1996 Swet Fire that burned 45,000 acres within the Selway-Bitterroot Wilderness offers a classic picture of how fish have evolved with fire. The high intensity fire happened to sweep across a chosen fishery research area where biologists had a good handle on fish species and numbers.

A year after the fire, Jakober helped set up 18 snorkeling transects in burned and unburned areas. "We found very few fish the year after the fire, and after rains the streams ran chocolate brown," he said. "In 1999, we saw basically a complete rebound," Jakober said. "The streams were clean. The ash was gone. Five-foot fireweed filled in the riparian areas. We had bull trout everywhere and good numbers of westslope cutthroat trout. We had a connected system that recolonized easily," Jakober concluded, "but so far the trend is that fish are more resilient than we give them credit for, even outside wilderness."

Those trends proved true following the 1/4-million-acre Canyon Creek fire of 1988 that seared tributaries of the North Fork Blackfoot River, a treasured cutthroat and bull trout fishery. As the Monture Creek fire today burns through the headwaters of a significant fishery, biologists look to the lessons learned in 1988.

Ron Pierce, Missoula-based fishery biologist for the Montana Department of Fish, Wildlife and Parks, said that initial fears proved unfounded. "The fire fried some of the smaller watersheds. We expected the fires to initially clean out the fisheries there and that later, ash and sediment would take their toll," Pierce said. Fire burned on both sides of bull trout spawning areas in the North Fork. "What we did see was a surge of brown and rainbow trout numbers for two to three years following the fire," he said. He believes that surge was related to a probable huge release of nutrients.

Ash and sediment in 1989 made life tough for bull trout juveniles in the North Fork Blackfoot, but both

bull trout and cutthroat are coming back fine, Pierce said. A vigorous restoration program downstream also contributes to success.

The message from fish biologists overall? Take a long view. It's tough to see dead fish in fire's aftermath, but as long as fish can freely migrate between streams and the aquatic system is in good shape, you'll soon witness a resurgence. Fish evolved with fire. Research on the Boise National Forest after severe fires in 1992 showed that by 1995 more bull trout and redband trout inhabited the burned sections of the Boise River than in the unburned reaches. Large-scale fires are more than part of life for our native fish. They have invigorated watersheds with one of nature's keys to health--complexity.

#

(Note: Northern Region news releases are available on the internet at <http://www.fs.fed.us/r1>)