

## **FIRE SUPPRESSION AND POST-FIRE REHABILITATION ON THE BITTERROOT NATIONAL FOREST—WHAT DID AND DIDN'T WORK FOR AQUATICS<sup>AFS</sup>**

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Over 320,000 ac of the Bitterroot National Forest burned in 2000 and 2003. Resource advisors monitored protection of aquatic resources during suppression and post-fire rehabilitation activities. Forest fisheries biologists, hydrologists, and other specialists served as resource advisors and worked closely with the fire and burned area emergency recovery teams. During suppression, resource advisors provided guidance to fire leadership, monitored compliance with standards, communicated their findings to the fire teams, and developed rehabilitation plans. Following suppression, resource advisors supervised the re-contouring of dozer lines (165 mi) and contour felling (1000 ac). Biologists and hydrologists were instrumental in the replacement of fish barrier culverts (21) and road obliteration (35 mi). The most effective post-fire rehabilitation actions for aquatic resources were replacing fish culvert barriers, upgrading undersized culverts, obliterating roads, and re-contouring dozer lines. Effectiveness of other actions such as contour felling, aerial seeding, and straw mulching was limited. During fire, biologists and hydrologists are most effective in protecting aquatic resources if they participate at several levels. Ideally, they should be involved in development of resource protection standards, know the inner working of the fire bureaucracy, be in the field near equipment and crews during the operational period, and stay with the same fire until rehabilitation is finished. This level of participation provides consistency to limit damage during suppression, irreplaceable knowledge of the site, and efficient follow through on complex rehabilitation plans.