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## Big South Fork National River and Recreational Area Trail Impact Assessment and Monitoring

### Description:

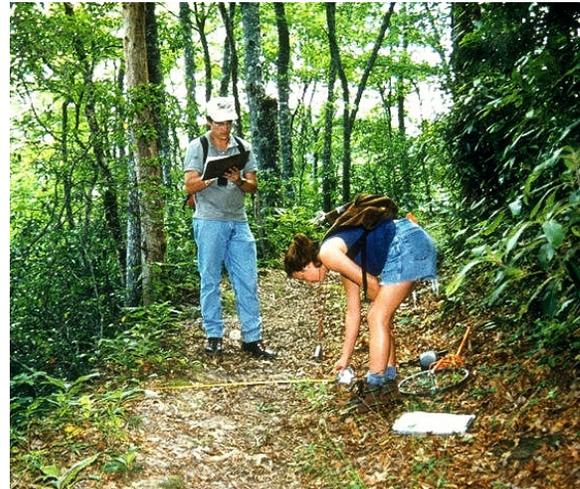
This research study provides Big South Fork National River and Recreational Area (Recreation Area) with the information and tools needed to complete its "Road and Trail Management Plan" and to describe and monitor the resource conditions of the park's trail system. Many of the Recreation Area's trails are multiple use, including many that receive heavy motorized and/or horse traffic. Research has documented that off-road vehicle (ORV) and horse use can cause substantial resource impacts. Research objectives are to: 1) Develop, pilot test, and refine a set of cost effective and scientifically defensible trail condition assessment procedures, and 2) Apply trail condition assessment procedures to a large sample of Recreation Area trails and prepare a technical report that compiles, analyzes and presents results and management recommendations.

### Progress to Date:

State-of-knowledge trail impact assessment and monitoring methods were developed and applied to park trails. Field staff completed surveys on a random sample of 77 miles of the park's 300 mile trail system. Data have been computer input and analyses and report writing are underway.

### Management Implications:

A technical report will be prepared to present survey findings. Data presentation will include summaries of trail conditions by trail, type of use and amount of use. Regression analyses are being employed to develop trail degradation models to improve understanding of the relative importance of use-related, environmental, and managerial factors. Causative and non-causative but influential factors will be investigated through these statistical analyses.



Causative factors include type and amount of trail use. Non-causative factors include topographic alignment, soil type, vegetation type, and density and effectiveness of trail maintenance features. Survey implications for management will be described, including recommendations addressing a variety of trail planning and trail management topics. For example, trail problems may be resolved by relocating a section of trail, reducing or eliminating a type of use that is causing a problem, reducing all use on a trail, educating users to adopt low-impact trail use practices, improving the quantity or quality of tread maintenance, or by installing special facilities such as bridges. Results will be used to develop recommendations for trail management decision making and future monitoring.

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For more information about Patuxent and our science, please visit our website at <http://www.pwrc.usgs.gov>



**Patuxent Wildlife Research Center**  
***Science Brief for Resource Managers***

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*Science Brief PWRC 2004-10*

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