

Extent and Conjuncture of Service Roads in a National Forest - A GIS Description

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ABSTRACT:

With ever increasing importance placed on protecting water quality, so increases the importance of being able to accurately describe existing and potential sources of water quality degradation and their effects riparian communities. This project was concerned with describing each of 48 watersheds within the Daniel Boone National Forest (DBNF) in terms of miles of road per acre, miles of road contained within a 100 foot buffer, the number of stream crossings, and the relationship of this data to fish community survey data collected at several permanent collection points throughout the forest. Utilizing ArcView, the fish community survey data and three separate ArcInfo coverage's of DBNF's roads, streams, and watershed boundaries were manipulated to develop one spreadsheet containing the aforementioned road data for each watershed, and another that lists the same watershed data for each of 412 fish community survey points. These data were evaluated to assess the effects that existing road networks may have on fish communities.