MacGregor Bates

Effects of Risk Attitudes on Extended Attack Fire Management Decisionmaking[1]

Donald G. MacGregor[2]

and

Armando González-Cabán[3]

ABSTRACT

Fire management inherently involves the assessment and management of risk, and decision making under uncertainty. Although organizational standards and guides are an important determinant of how decision problems are structured and framed, decision makers may view risk-based decisions from a perspective that is unique to their background and experience. Previous research has shown that individual differences in risk attitudes of fire managers exert a significant effect on fire management practices. Within the USDA Forest Service, Extended Attack (EA) incidents are those not contained within the first burning period after ignition. Simulation-based methodologies offer a potentially viable approach for improving our understanding of the role that risk attitudes and problem framing play in determining key decisions associated with EA incidents, and particularly on the decision to disengage, reengage after disengagement, and transitioning to a higher level of incident command. Scenario-based exercises in which Type 3 Incident Commanders respond to simulated incident conditions provide an opportunity to study decision behavior based on current theories and models of decision making that point to the role of problem framing and incentive structures as key decision drivers.

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[2] Contact Author: Senior Scientist, MacGregor-Bates, Inc., 1010 Villard Ave., PO Box 276, Cottage Grove, OR 97424 Email: donald@macgregorbates.com

[3] Research Economist, USDA Forest Service, Pacific Southwest Research Station, 4955 Canyon Crest Drive, Riverside, CA 92507; Email: agonzalezcaban@fs.fed.us