

Effects of Road Sign Wording on Visitor Survey Non-Response Bias

Susan M. Kocis¹, Stanley J. Zarnoch² and Donald B.K. English³

¹ U.S.D.A. Forest Service, Six Rivers NF, Bridgeville, CA, USA
e-mail: skocis@fs.fed.us

² U.S.D.A. Forest Service, Southern Forest Experiment Station, Asheville, NC, USA

³ U.S.D.A. Forest Service, Southern Forest Experiment Station, Athens, GA, USA

On site interviews to collect visitor data is a key component of the USDA Forest Service Visitor Use Monitoring (NVUM) program's process to estimate visitation volume. In many areas, especially higher speed roads and roads with higher proportions of non-recreation traffic, many vehicles may not stop for an interview. Roadside signs are used to warn and inform drivers of the survey location ahead of them. Wording on the signs may condition non-recreation visitors to self-select as to whether or not they decide to stop for an interview. Since the primary purpose of the interview is to calibrate a mechanical traffic counter, self-selection behavior can lead to bias in the resulting visitation estimate. Non-response bias of national forest traffic was examined by using four different wordings for road signs during NVUM interview days. The experiment was performed using a randomized block design with each treatment (sign) being applied to five different road locations. Statistical analysis was performed to determine if any particular sign wording significantly affected (1) the rate of visitor response and (2) the mix of visitors who stopped for interviews. Results and implications for future application are also discussed.

Key Words: National Visitor Use Monitoring, NVUM, non-response bias, visitor response, road signs, sign wording