SEMP Task 1-1.7: Percent Bare Ground for Fort Polk Training Lands

This monitoring task assesses the validity of the assumption that the maneuver damage and repair program is adequate to minimize or avoid long-term degradation of training lands. This assessment is based on landscape-scale sampling of vegetative communities and percent cover (i.e., the portion of the ground surface that is covered with vegetation). A performance target was established to maintain less than 20 percent bare ground in drop zones[1] and less than 5 percent bare ground in forested maneuver areas at the 95 percent confidence level[2].

Based on the results of vegetation monitoring conducted during the 2006 growing season, results for percent bare ground were Green (upper 95% confidence limit of the median percent bare ground is < 20% for drop zones and < 5% for forest maneuver areas). The percent bare ground for both drop zones and forest maneuver areas was well within the established thresholds, with medians of 5.6 percent (upper one-sided 95% confidence limit of 7.9) and 0.0 percent (upper one-sided 95% confidence limit of 0.0) respectively. The monitoring results for percent bare ground are shown graphically in Figure 1-1.7, with the medians and associated one-sided lower 95 percent confidence limits (lower blue lines) below the respective thresholds for drop zones and forest maneuver areas.

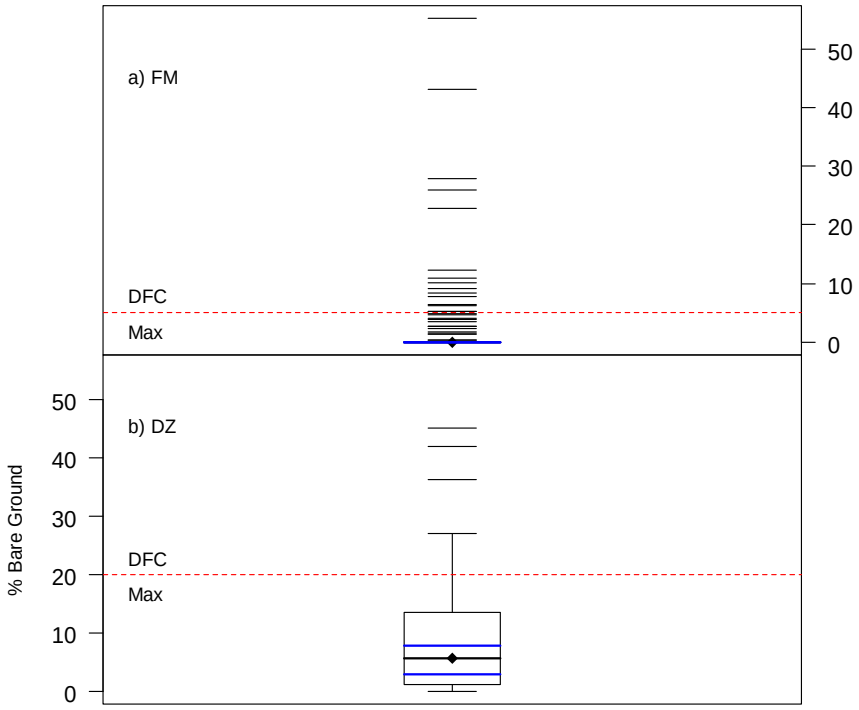

Figure 1-1.7. Distribution of percent bare ground at RTLA sample sites within Forest Maneuver (FM) areas and Drop Zones (DZ) on Fort Polk's primary training lands in 2006. The box represents the inner quartile range (25th to 75th percentiles), and upper and lower whiskers extending from the box represent the smallest and largest observations within one step (1.5 times inner quartile range). The median (♦) is marked by a line through the box, extreme values by horizontal bars (—), one-sided upper and lower 95% confidence limits on the median by blue lines (—), and land use management objective thresholds by a red line (---).

[1] A drop zone, or DZ, is a pre-determined area upon which parachutists or objects land after making an intentional parachute jump or drop. The drop zones on Fort Polk are used intensively and are subject to repeated ground cover and soil disturbance. For purposes of protecting downstream water quality, the DZs and other intensively used training sites on Fort Polk are treated as "sandboxes", where the overriding environmental management objective is to "keep the sand in the sandbox".

[2] Confidence intervals measure the precision of an estimated value. The interval represents the range of values, consistent with the data, that is believed to encompass the "true" value with high probability (usually 90 or 95%). The confidence interval is expressed in the same units as the estimate. Wider intervals indicate lower precision; narrow intervals indicate greater precision.