

Addendum to the Summers Border Report: Military Personnel

October 30, 2000

Of the 6276 participants analyzed in the recent Summers Border Report (June, July and August, 1997 through 2000), 514 indicated a military vocational affiliation. Among these, 337 indicated belonging to military bases or stations that could clearly be identified. While the majority of military personnel came from the 32nd Street Naval Station, Camp Pendleton and the Naval Air Station, six other facilities (the SD Naval Training Center, the Naval Hospital, the SD Marine Recruit Depot, Marine Corp Miramar, the Naval Amphibious Base, and the Anti-Sub Warfare Station) were also represented.

Because of limited sample sizes, it was impractical to analyze this data over time according to specific military base. However, bases were aggregated into Marine and Navy sub-categories. The Marine category included 137 participants affiliated with Camp Pendleton, the Marine Corp Depot and Marine Corp Miramar station. The Naval category contained the remaining 6 bases and was comprised of 200 participants.

Analysis of returning BACs of military personnel (both drivers and pedestrians) revealed a significant interaction between Year and whether participants had a Navy or Marine affiliation [$F(3, 6) = 12.2, p < .05$]. For Marines, BACs over time ($B = -.019$) dropped significantly compared to the change in BACs for Navy personnel ($B = .005$).

Very few military personnel drove into Tijuana (10.9% of all military in our sample) and consequently separate analyses could not be conducted on military drivers alone. However, the data does suggest the relative frequency of drivers may account in part for the difference in BACs between participants with Naval and Marine affiliations. Analyzing only pedestrians, the interaction between Military Affiliation and Year was weaker ($p = .06$) yet consistent in pattern [for Marines, $B = -.014$; for Navy personnel, $B = .006$]. **Figure A** depicts estimated mean BACs for returning Marine and Navy pedestrians collected during the summer month between 1997 and 2000.

An analysis was conducted on the proportion of Marine and Navy pedestrians that returned from Tijuana with BACs at or above .08. The proportion of pedestrians with BACs at or above .08 did not vary among Years for both Marines ($p = .18$) and Navy personnel ($p = .19$). Similarly, analysis of DUI violations failed to reveal differences among Years ($p = .18$ for Marines; $p = .67$ for Navy). Note however that DUI violations are sampled in very small frequencies, and such analysis may lack sufficient statistical power to detect differences.

An additional analysis was conducted on the three military bases – Camp Pendleton, the 32nd Street Naval Station, and the Naval Air Station – that were most strongly represented in our sample. Although sample sizes were not sufficiently large to allow estimation for each year, mean BACs were estimated for each base across two-year periods. Mean BACs were estimated for the summer months aggregated across 1997 and 1998, as well as for the summer months during 1999 and 2000. **Figure B** depicts BACs of returning pedestrians affiliated with these bases. Analysis of variance failed to detect significant differences among bases during the 1997 – 1998 span ($p = .12$) nor during the 1999 – 2000 span ($p = .61$). Analysis reveals that the decrease in BAC for Camp Pendleton pedestrians was statistically significant [$F(1, 6) = 7.8, p < .05$]. The ostensible increase in mean BACs for pedestrians affiliated with the Naval Air Station and 32nd Street Station did not reach statistical significance ($p = .12$ and $p = .23$ respectively).

Estimated counts of DUI violations are provided in **Figure C**. Counts represent the estimated mean number of violations expected per week summed across Wednesday, Friday and Saturday. It is clear from the figure that Camp Pendleton was associated with significantly fewer DUI violations during the 1999 and 2000 summer months than during the 1997 and 1998 summer months ($p < .05$). The sample difference for the 32nd Street Station was not significant, and there were too few sampled cases of DUI violations for the Naval Air Station to estimate valid confidence intervals. Despite the drop in counts of DUI violations for Camp Pendleton personnel, the proportion of DUI violations (relative to total returning crossers) did not change significantly ($p = .31$).

Figure A. Estimated BACs of pedestrians according to Marine or Naval affiliation

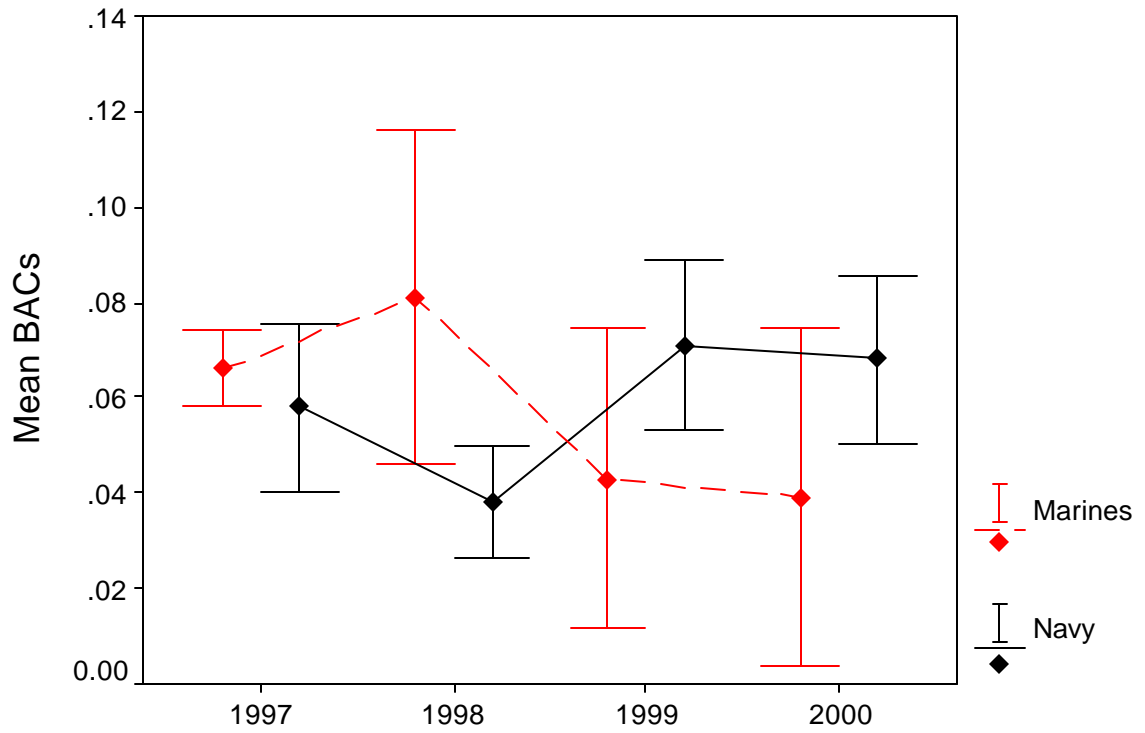


Figure B. Estimated BACs by Military Base

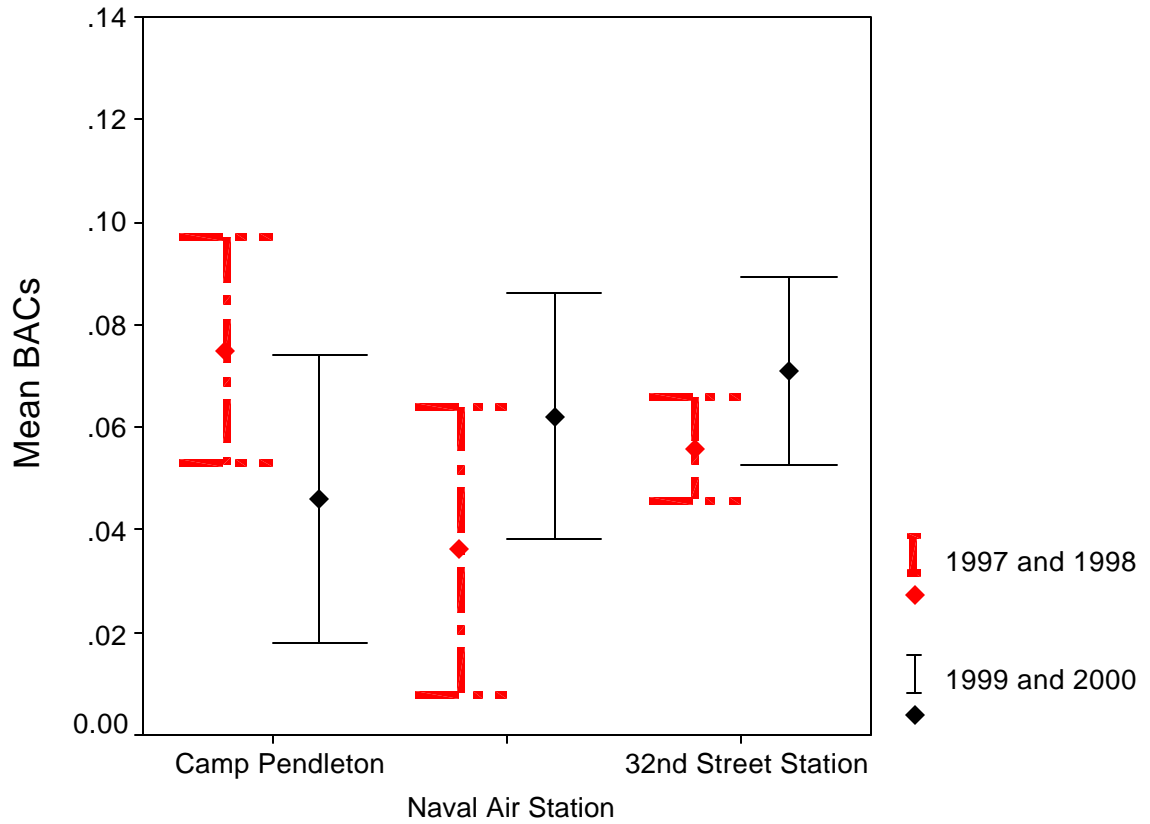


Figure C. Estimated DUI violations by base

